PORT OF LIVERPOOL.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

PORT SANITARY AUTHORITY.

FOR THE YEAR

1922.

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PORT SANITARY AUTHORITY

OF

LIVERPOOL.

REPORT FOR THE YEAR 1922,

BY THE

MEDICAL OFFICER OF HEALTH.

In accordance with the duty imposed by the Local Government Board in the General Order, dated March 23rd, 1891, the following Report of the operations of the Liverpool Port Sanitary Authority for the year 1922 is herewith submitted.

The Report covers the work of the Authority during the year, and includes references to the following:—

(*a*) Measures adopted under the Cholera, Plague and Yellow Fever, and Allied Orders of the Local Government Board, and under the Port Sanitary Authorities (Infectious Diseases) Regulations, 1920.

(*b*) The measures taken to reduce the number of rats on dock quays and on ships and to ascertain the existence of plague amongst any such rats.

(*c*) Action taken in regard to the sanitation of vessels.

(*d*) The inspection of imported foods under the Orders of the Local Government Board.

(*e*) The Medical Inspection of Aliens under the Aliens Order, 1920.

The trade of Liverpool is world-wide, as is indicated by the following list of ports from which vessels arrive in the Port Sanitary District:—

FOREIGN.—Quebec, Montreal, Halifax, St. John's, New York, Boston, Philadelphia, Savannah, New Orleans, Galveston, Colon, Vera Cruz, West Indies, Demerara, Para, Manaos, Pernambuco, Bahia, Rio de Janeiro, Monte Video, Buenos Ayres, Rosario, Punta Arenas, Valparaiso, Callao, San Francisco, Vancouver, Stockholm, Copenhagen, Hamburg, Rotterdam, Antwerp, Havre, La Pallice, Bordeaux, Oporto, Lisbon, Cadiz, Barcelona, Valencia, Almeria, Bilbao, Marseilles, Genoa, Naples, Algiers, Tangier, Tripoli, Constantinople, Jaffa, Alexandria, Port Said, Las Palmas, Teneriffe, Dakar, Bathurst, Gambia, Freetown, Monrovia, Accra, Akassa, Seccondee, Calabar, Lagos, Fernando Po, Benguela, Cape Town, East London, Port Elizabeth, Durban, Zanzibar, Mombasa, Beira, Karachi, Bombay, Colombo, Calcutta, Rangoon, Bangkok, Saigon, Singapore, Sourabaya, Hong Kong, Hankow, Shanghai, Yokohama, Nagasaki, Vladivostock, Australian and New Zealand Ports.

BRITISH.—London, Southampton, Bristol, Swansea, Cardiff, Dublin, Cork, Waterford, Belfast, Larne, Glasgow, Aberdeen, Leith, Isle of Man, and Welsh Coast.

Almost every conceivable kind of cargo is carried by Liverpool ships, but the principal items of import and export are:—

IMPORTS.—Corn, Grain, Cotton, Fish, Fruit, Hides, Leather, Meats, Oil, Rubber, Sugar, Tobacco, Wool.

EXPORTS.—Carriages, Chemicals, Chinaware, Cotton Goods, Linen, Machinery, Oil, Rubber, Soap, Tobacco, Woollen Goods.

TABLE 1.

AMOUNT OF SHIPPING ENTERING PORT SANITARY DISTRICT DURING THE YEAR.

	Number.	Tonnage.	Number Inspected		Number reported to be defective.	Number of Orders issued.
			by Medical Officer of Health.	by Inspectors of Nuisances.		
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign—						
Steamers ...	3,815	11,190,393	454	3,592	677	—
Sailing ...	11	4,310	—	1	—	—
Fishing ...	—	—	—	—	—	—
Total—Foreign	3,826	11,194,703	454	3,593	677	—
Coastwise						
Steamers ...	10,922	3,165,761	23	857	16	—
Sailing ...	1,290	72,915	—	57	5	—
Fishing ...	—	—	—	—	—	—
Total—Coastwise	12,212	3,238,676	23	914	21	—

* Figures in column 1 and 2 supplied by H.M. Collector of Customs for the Port.

Infectious Diseases.

A table shewing the number of cases of each of the notifiable diseases landed from vessels arriving in Liverpool during 1922 is given on page 32.

The figures do not in any instance vary so widely from the average as to call for any special comment.

Vessels arriving from ports regarded as infected with dangerous infectious diseases are boarded in the river before docking by the Assistant Port Medical Officers. The list of such ports, which is given to all pilots (who speak Formby lightship for the Medical Officer, and also frequently send a wireless message giving the expected time of arrival) is varied from time to time according to the distribution of plague, smallpox, etc. The list does not include every infected port, and does not require very frequent revision, as it is compiled in accordance with recognised trade routes of Liverpool ships, so that all those arriving from endemic centres are boarded because they are certain to have touched at one or other of the ports mentioned. Alterations have occasionally to be made on account of special outbreaks of disease.

In addition, the Medical Officers board all the large foreign-going passenger vessels arriving in the Port, and obtain information as to the health of passengers and crew from the ship's surgeon.

In regard to other ships many are visited in the river by a Sanitary Inspector in the Port Sanitary Authority's launch, and for the rest the officers of H.M. Customs at once notify the occurrence of any infectious or doubtful sickness on any ships they board, whether in the river or in dock.

The control over infectious disease brought in the port is thus very complete. There must, of course, always remain the danger of a person arriving in the incubation stage of an infectious disease. This is particularly the case in regard to smallpox, and to combat this danger as far as possible the names and addresses of destination of all passengers and crew are obtained not only from all ships from plague-infected ports, but also from certain other vessels which are known regularly to enter ports where smallpox is prevalent, and subsequently to arrive in Liverpool within the incubation period of that disease.

Plague.

No cases of human plague arrived in Liverpool during the year.

Rodent plague was discovered on three ships, but in each case active measures were taken against the rats on board.

S.S. "Warwickshire."—On February 12th, 1922, this vessel arrived in the Sandon Dock from Rangoon, Colombo, Suez, Port Said, Marseilles and London. On February 13th, 1922, the vessel was visited by a Sanitary Inspector, a rat catcher and a rat searcher. During the discharge of cargo the rat searcher discovered dead rats amongst a consignment of mattress fibre in No. 5 Hold. These rats were reported by the City Bacteriologist to be plague-infected.

When the vessel was empty she was fumigated throughout with SO_2, the native crew being accommodated ashore meanwhile.

The total number of rodents caught alive, found dead, or killed by fumigation, was 64 rats and 2 mice. Of these, 36 rats and 1 mouse were infected with plague.

No human cases of plague occurred. Intensive trapping and careful searching on the dock quays revealed no plague infection among the rats on shore. The destination of all cargo was traced, and the Medical Officers concerned were notified. A large consignment of mattress fibre from the after holds where the infected rats were found was disinfected by steam. This material was to be used for upholstery, and there appeared to be special danger from the possibility of infected fleas being conveyed in it. The vessel having discharged part cargo in London, the Medical Officer of the London Port Sanitary Authority was advised of the discovery of rodent plague.

The importance of maintaining a staff of rat searchers is well illustrated by this case, for had it not been for the prompt discovery of the dead rats, not only might cases of plague have arisen amongst the native crew on board, but infection of the rats on the quays and in the sheds might have occurred. The rats caught alive on board were all examined and found to be healthy, which demonstrated that rat catching alone is not sufficient if the importation of plague is to be prevented.

S.S. " Elpenor."—Arrived on April 22nd from Japan and China via Port Said and Genoa. No sickness had occurred during the voyage and no dead rats had been found. A rat searcher visited the vessel and reported very few signs of live rats and no dead ones. A single rat caught alive in a trap on April 28th was reported to be plague infected. The vessel was at once fumigated with SO_2, and the usual steps as detailed in the case of the S.S. " Warwickshire " were taken.

A mouse caught on May 2nd in the vicinity of this ship was reported to be infected with plague. Intensive trapping and searching on the adjoining quays revealed no extension of the infection to the rats on shore.

S.S. " Ardeola."—Arrived from Las Palmas on June 26th, 1922. On June 27th a rat searcher discovered four dead rats on board. These were reported to be plague infected. The vessel was fumigated with SO_2 when empty. Careful investigation showed that the infection had not been communicated to the rats on shore.

It is of special interest to note that when the three ships mentioned above arrived in the port there was nothing to indicate the existence of plague on board. Only the careful routine examination of the vessels during the discharge of cargo revealed the infection. The importance of rat-proofing of all parts of the docks estate is also emphasised. A great deal of attention is paid to this work by the staff of the Port Sanitary Authority. As a result not only is the normal rat population of the docks kept as low as possible, but also in the event of a plague-infected rat escaping from a ship to the shore it will in all probability die in the open. Consequently the rat fleas are in this country usually exposed to unfavourable climatic conditions and perish before they have an opportunity of reaching another host. If there existed on the docks numerous sheltered refuges for infected rats and a dense rat population a very serious epizootic might arise. When methods of rat proofing are being advocated opposition is usually based on the contention that rats and ships are inseparable. It is admitted that it is not practicable to keep a large port free from rats, but where, as in Liverpool, there is a big trade with plague-infected countries, it is obviously in the interests of the port to take such steps as will prevent any imported plague infection from being communicated to the rats on shore.

The total number of rats, mice, etc., examined for the presence of plague from the Port during the year was made up as follows :—

Rats, 7,849.	Mice, 187.

Of these, the bacillus of plague was found in 57 rats and 2 mice. The majority of these were imported on one vessel. Prompt measures were taken in each instance, and no spread of the disease occurred from these sources of infection.

Smallpox.

On 18th July, 1922, the S.S. "Egori" arrived from West Coast of Africa, and the ship's surgeon reported a case of smallpox on board. The vessel was visited by the Assistant Port Medical Officer, who found a steward to be suffering from a severe pustular eruption which was not smallpox. In view of his condition the patient was removed to the Port Sanitary Hospital until other arrangements could be made for his accommodation.

On December 20th, 1922, the S.S. "Montcalm" arrived from St. John's, Newfoundland. A case of chickenpox, a third class passenger aged 2½ years, was reported to the Port Sanitary Authority. The child was found to be suffering from smallpox and was removed with the mother and another child to the Port Sanitary Hospital.

On December 25th, 1922, the S.S. "Montclare" arrived from St. John's, Newfoundland, with a child of 8 months on board reported to be suffering from chickenpox. On arrival, as the child was unvaccinated, she was removed in company with her parents to the Port Sanitary Hospital as suspected smallpox. The disease proved to be chickenpox.

On April 29th the s.s. "Trafford Hall" arrived from Bombay. On arrival the crew were inspected and were apparently all well, but on April 30th a native seaman was reported to have a skin eruption. He was examined by the Assistant Port Medical Officer and as the disease appeared to be chicken-pox, the patient was removed to City Hospital, Fazakerley. Subsequent observation, however, led to the conclusion that the case was one of mild Smallpox, and the patient was transferred to the Port Hospital, New Ferry.

For table showing cases occurring since the year 1881, see page 31.

Cholera and Typhus Fever.

In spite of the prevalence of these diseases in Central Europe, and the large transmigrant traffic through Liverpool from Central Europe to U.S.A., no cases of either Cholera or Typhus occurred in Liverpool or on Liverpool ship. This is undoubtedly due to the very careful system of medical inspection and disinfestation which is carried out on the Continent in accordance with the requirements of the United States Public Health Department.

Anthrax.

Forty samples of raw and disinfected wool, etc., were examined for the Government Disinfecting Station through the Port Sanitary Authority. Three of the raw samples were found to be infected with Anthrax, but the disinfected samples were negative.

TABLE 2.

STATEMENT OF THE NUMBER OF VESSELS ARRIVING INFECTED OR SUSPECTED WITH PLAGUE AND FROM INFECTED PORTS, TOGETHER WITH PARTICULARS OF THE MEASURES OF RAT DESTRUCTION AND THE EFFECTS OF SUCH MEASURES DURING THE YEAR.

Number of Vessels arriving in the Port Sanitary District.			Number of Vessels subjected to Measures of Rat Destruction.				Measures employed.	Effects of these Measures.	
Plague infected.	Plague suspected.	From infected Ports.	Plague infected.	Plague suspected.	From infected Ports.	Other Vessels.		On Rats—Number killed.	On Cargo.
3	—	*414	3	—	349	291	Searching, Traying, and Trapping. Fumigation by SO_2 and by H.C.N.	10,642	None (Vessels only fumigated when empty).

*Include 65 Manchester bound vessels.

TABLE 3.

Table showing the number of Rats obtained on ships and quays by the Authority's rat-catchers.

Year.	NUMBER OBTAINED.			NUMBER					
				EXAMINED.			DESTROYED.		
	From Ships.	From Quays.	Total.	From Ships.	From Quays.	Total.	From Ships.	From Quays.	Total.
1913	7,943	958	8,901	3,280	938	4,218	4,663	20	4,683
1914	10,083	944	11,027	5,264	917	6,181	4,819	27	4,846
1915	9,400	1,256	10,656	6,204	1,234	7,438	3,196	22	3,218
1916	10,881	1,678	12,559	7,064	1,312	8,376	3,817	366	4,183
1917	9,174	1,551	10,725	6,379	1,457	7,836	2,795	94	2,889
1918	7,251	1,188	8,439	5,541	1,159	6,700	1,710	29	1,739
1919	8,971	1.336	10,307	6,023	1,287	7,310	2,948	49	2,997
1920	8,088	1,593	9,681	5,276	1,517	6,793	2,812	76	2,888
1921	8,867	2,405	11,272	5,031	2,195	7,226	3,836	210	4.046
1922	*10,642	2,830	13,472	5,520	2,519	8,039	5,122	311	5,433
Total......	41,300	15,739	107,039	55,582	14,535	70,117	35,718	1,204	36,922

* 3,800 of these were obtained after fumigation and 281 mice are included in these figures.

TABLE 4

CITY AND PORT OF LIVERPOOL.

RETURN OF RATS CAUGHT, EXAMINED OR DESTROYED.

DATE.	CITY.				PORT.				CITY.		PORT.		TOTAL CAUGHT
1922.	Warehouses, Stores, &c.	Sewers.	Other Sources.	Total.	Ships.	Quays.	Other Sources.	Total.	Examined.	Destroyed.	Examined.	Destroyed.	(City and Port.)
January	342	345	635	1,322	1,020	186	—	1,206	290	1,032	628	578	2,528
February	284	319	401	1,004	726	228	6	960	243	761	648	312	1,964
March	292	448	708	1,448	973	184	—	1,157	323	1,125	593	564	2,605
April	390	320	352	1,062	702	169	—	871	216	846	551	320	1,933
May	513	452	423	1,388	735	213	7	955	305	1,083	690	265	2,343
June	465	325	769	1,559	746	223	2	971	245	1,314	748	223	2,530
July	562	429	515	1,506	529	231	24	784	276	1,230	633	151	2,290
August	386	434	546	1,366	874	218	25	1,117	232	1,134	653	464	2,483
September	456	631	533	1,620	1,181	197	165	1,543	269	1,351	769	774	3,163
October	551	677	619	1,847	839	202	107	1,148	333	1,514	801	347	2,995
November	455	720	745	1,920	1,106	148	115	1,369	283	1,637	705	664	3,289
December	336	589	346	1,271	1,211	113	67	1,391	189	1,082	620	771	2,662
	5,032	5,689	6,592	17,313*	10,642	2,312	518	13,472	3,204†	14,109	8,039	5,433	30,785

* Including 94 Mice.

† Including 40 Mice and also 2 Rats sent for other examination.

TABLE 5.

STATEMENT OF THE RATS CAUGHT MONTHLY BY THE PORT SANITARY STAFF, THEIR VARIETY AND NUMBERS EXAMINED.

Number of	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Black Rats ...	1,050	806	1,033	755	722	777	588	927	1,243	928	1,128	1,126	11,083
Brown Rats ...	145	128	117	105	145	177	182	179	289	194	207	240	2,108
*Rats Examined	617	623	586	540	659	737	619	642	758	775	694	602	7,852
Rats Infected with Plague ...	—	34	—	1	—	10	6	—	—	—	—	—	51
Rats Not Infected ...	617	589	586	539	659	727	613	642	758	775	694	602	7,801

* 1 Mouse found, Infected, in the month of May.

TABLE 6.

The combined returns of all rats and mice caught and destroyed by shipping firms employing their own rat-catchers, by rat-catching companies, and by the Public Health Authorities, are as follows:—

	Rats.	Mice.	Rats.	Mice
PORT—				
On vessels	50,073	92		
On quays	2,641	189		
			52,714	281
CITY—				
In warehouses	5,018	14		
In sewers and from other sources ...	12,201	80		
			17,219	94
		TOTAL ...	69,933	375

Number of Visits to **Vessels** by Rat Catchers	3,991
Do. do. do. Rat Searchers	3,376
Do. do. **Quays, Sheds, etc.,** by Inspectors ...	624
Do. do. do. do. Rat Searchers	1,134
Do do. do. do. Rat Catchers	4,114

Steam Launch "Snowflake."

The boarding of ships in the river under the Cholera, Plague and Yellow Fever Orders and the Port Sanitary Authorities (Infectious Diseases) Regulations has been greatly facilitated by the acquisition of the steam launch "Snowflake," which was put in commission on 25th April, 1922. The launch has given satisfactory service, boarding in the river never yet having been found impracticable on account of stress of weather. A number of minor defects which were overlooked during reconditioning have now been made good, with the result that in speed, reliability and ease of handling the launch is now considerably better than when purchased by the Port Sanitary Authority, and it may confidently be anticipated that the cost of maintenance will, during 1923, show a marked decrease. The advantages of always having a launch at hand compared with the delay and uncertainty inseparable from the system of hiring tugs are obvious. Ships are not now kept waiting till the last moment, and eventually boarded in dock because no river transport is available for the Medical Officer. The more easily attention is obtained the more readily is sickness notified, and it is certainly desirable that masters of vessels should receive every encouragement to seek the opinion of the Port Medical Officers in regard to any case of sickness on board. Even if the case proves not to be one of the notifiable diseases, the Medical Officer can, if he boards the vessel in the river, give assistance to the patient and save time and trouble by communicating with the owners or agents, who can make arrangements for the removal of the patient immediately the ship docks or for the attendance of a private practitioner if the case is to be treated on board.

In addition to the boarding of vessels from infected ports which is done by the Assistant Port Medical Officers, a number of other ships are visited in the river by one of the Sanitary Inspectors, who makes enquiries into the health of the crew and the sanitary condition of the vessel. It is thus possible to maintain a much closer watch for cases of sickness arriving in the Port than was practicable under the former system of hiring tugs. Moreover, the number of ships boarded in the river can at any time be extended at a moment's notice, without inconvenience to shipping and without increased expense to the Port Sanitary Authority.

The Master and the Mate of the "Snowflake" are now responsible for obtaining information of the arrival of ships requiring to be visited by the Medical Officer between 5 p.m. and 8 a.m. This has rendered it unnecessary to fill a vacancy which occurred on the staff a year ago, as the whole time of one Inspector was formerly occupied in attending to this duty. All the Sanitary Inspectors are now available for their proper work on the docks.

It is unfortunate that the first year of running a Port Sanitary Launch should be a time of financial stringency, for unexpected items of expenditure occasion unduly severe criticism. But the old system of hiring tugs had, even before the war, been realised to be unsatisfactory in a port of the size and importance of Liverpool. A special launch was to have been built in 1914, but the outbreak of war prevented it. Since then the cost of constructing such a vessel has been prohibitive. The "Snowflake" was considered to be likely to meet the requirements of the Port Sanitary Authority, both in regard to capital outlay and cost of maintenance, and the past year has fully justified these expectations.

No vessel suitable for the work in the Mersey could have been purchased at a lower price, fuel consumption is remarkably low, and the launch has never failed to do the work required of it. The cost of repairs has been considerably higher than was anticipated, but these have been mainly in regard to defects which existed before the launch was purchased by the Port Sanitary Authority.

During the second year's working, repairs should be limited to making good ordinary wear and tear, and the annual cost of the launch should then closely approximate to the original estimate submitted to the Committee.

Fumigation of Ships.

During the year 76 ships were fumigated at Liverpool for the purpose of rat destruction. In all but seven instances the fumigant used has been sulphur dioxide gas generated by burning sulphur in open pots. This method is carried out very efficiently by various fumigating companies who employ men well trained in every detail of the process.

This greatly facilitates the work of the Sanitary Inspectors who attend the fumigations to ensure that the requirements of the Port Sanitary Authority are strictly complied with.

In the early part of the year hydrocyanic acid gas began to be used because it appeared that the United States Public Health Authorities required the first and second class passenger accommodation of the large trans-Atlantic liners to be included in the routine fumigation to which these vessels are subjected every six months. But as these United States Regulations have been somewhat relaxed, and on account of the great danger to human life involved in the use of cyanide, which, moreover, was never taken up enthusiastically by any of the local fumigating companies, sulphur dioxide has again become the only fumigant in use in this port.

Seven ships were fumigated throughout with hydrocyanic acid gas, which was also used in a local fumigation of crew's quarters for the destruction of bugs. In every case the object of the fumigation was achieved without accident of any sort, and without complaint of ill effects from anyone either during or after the fumigations.

Every detail of the procedure was carefully supervised by the staff of the Port Sanitary Authority, and the final certificate that the ship was clear of gas in quantities dangerous to human life was issued by one of the Assistant Medical Officers, who, wearing an oxygen breathing apparatus, personally tested every part of the ship by observing the condition of live rats which he carried in a cage. If the rats remained quite unaffected, a poisonous concentration of gas could not be present, but in order to give a generous margin of security and to maintain the confidence of the men who would subsequently work on board, the Medical Officer, having satisfied himself that there was no danger, removed his oxygen apparatus and breathed the air in the various parts of the ship. A certificate was not issued till it was hardly possible to detect the presence of hydrocyanic acid gas.

It has been stated that upholstery, cushions, bedding, etc., will hold the gas in spite of thorough aeration, and a case is recorded on the Continent where a railway carriage was fumigated with cyanide and subsequently well aerated. When the carriage was put into service again two children lay down and slept on the cushions, and both died of poisoning by HCN which escaped from the upholstery under the influence of the warmth of their bodies. Whether this is a genuine source of danger, experience in Liverpool is not great enough to show. But in the case of one vessel dealt with in this Port the crew's quarters were fumigated with the bedding, etc., still in place, and the crew returned to the ship and slept on board immediately the "all clear" certificate was issued. No ill effects were complained of by any member of the crew.

In the United States a mixture of HCN and cyanogen chloride is now being used. The latter gas is lachrymatory in non-lethal doses, and consequently sufficient warning of danger is given to enable any person exposed to the gas to escape. Whether difficulty may arise from the different densities, and therefore the different powers of diffusion of the HCN and the CNCl remains to be seen. Further, the insidious action of HCN is probably one of the main factors in its efficiency as a fumigant. The introduction of a lachrymator will not only warn any human being exposed to danger, but will also cause rats and vermin to attempt to gain places where they may escape a lethal concentration of the gas.

A method of generating the HCN in a machine on shore and circulating it through a section of a ship, subsequently assisting the clearing of the gas by means of a suction fan, has been successfully demonstrated for relatively small spaces, but appears difficult of application to the huge cubic capacities which have to be dealt with on board ship.

The use of liquefied hydrocyanic acid gas appears to present great possibilities as a time and labour saving process, but the danger to life is not less than with the methods already used.

The future of HCN as a fumigant in this country depends on several factors. Firstly the danger of fatal accident must be reduced to a minimum, secondly the method must be quicker and not much more expensive than the sulphur process. Lastly, if cyanide can be shown to be really effective in destroying bugs, then there is at once a wide field open for it. There are any number of contact poisons for bugs on the market, but the difficulty, in the case of ships at any rate, is to achieve contact between the bugs and the poison. Short of stripping fittings and match boarding, and opening up every crevice and crack, it is impossible to reach the bugs with liquid vermicides. Even sulphur dioxide is not sufficiently diffusible to reach many of the bugs in their almost inaccessible haunts. If cyanide with its greater powers of diffusion, its highly toxic properties, and its insidious action will kill bugs in their most remote hiding places, then it will provide the solution of a very difficult problem, for, under existing circumstances, to rid a ship of bugs is a lengthy and expensive procedure. There would appear to be sufficient evidence to justify careful investigation of this question. In laboratory experiments bugs can easily be killed by HCN, but conditions on ships are very different, and the problem to be decided is whether cyanide in the concentrations readily obtainable on board will, in a reasonable time, destroy all the bugs without the necessity for stripping down woodwork, etc.

Success along these lines would ensure a great future for cyanide fumigation in this country.

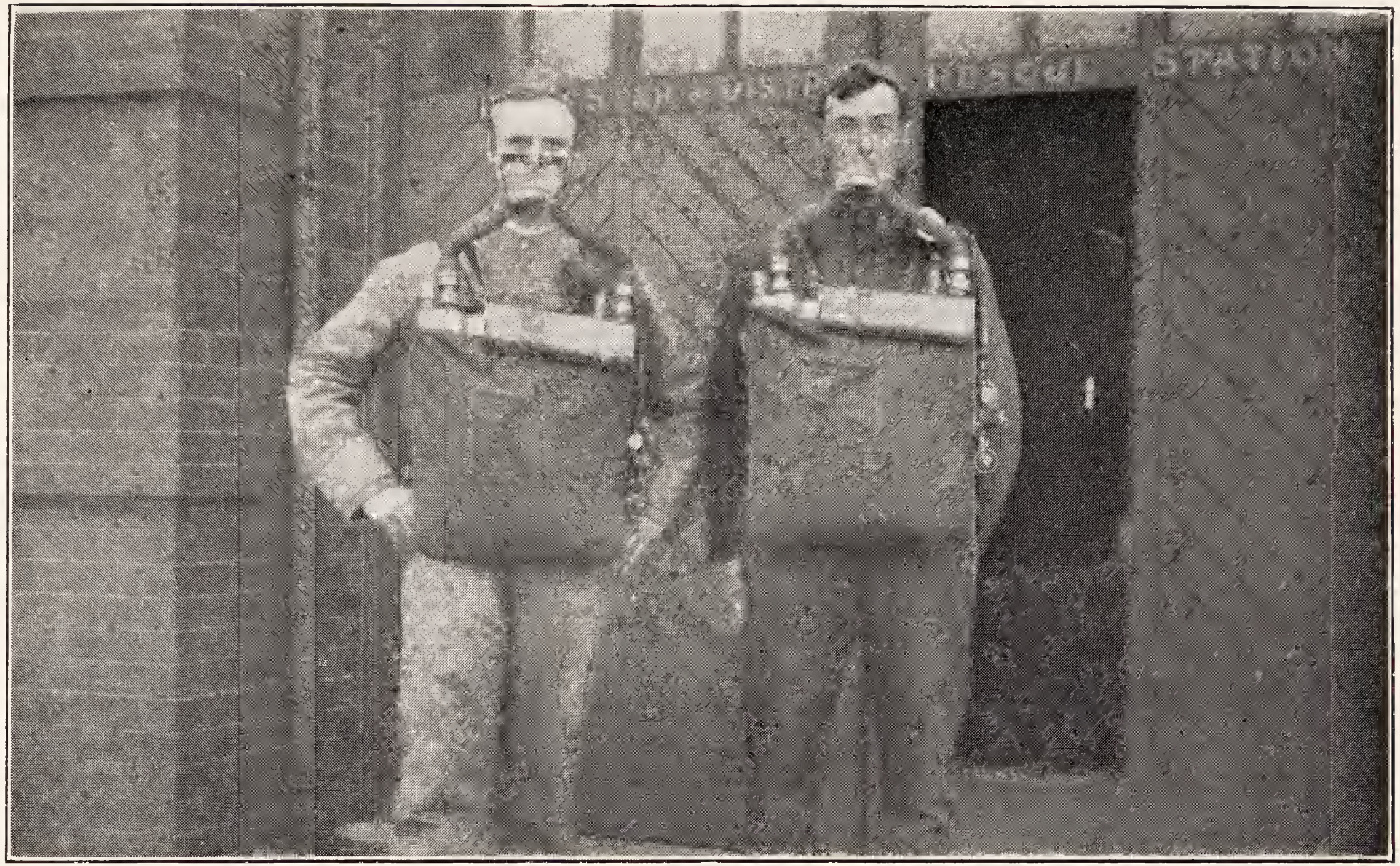
In order to carry out fumigation on plague-infected and other ships with poisonous gases, it is absolutely necessary to have specially trained officers to supervise and carry out the work. The Liverpool Port Sanitary Authority desired to attain this end, and through the kindness of the Committee of the Doncaster and District Mine Rescue Station, opportunities were afforded for training; accordingly, certain members of the staff have undergone this course of instruction.

The course of training is a very comprehensive and practical one as will be seen from the following particulars and illustrations annexed. The men are taught how to handle intelligently and wear rescue apparatus, and various important points are impressed upon them.

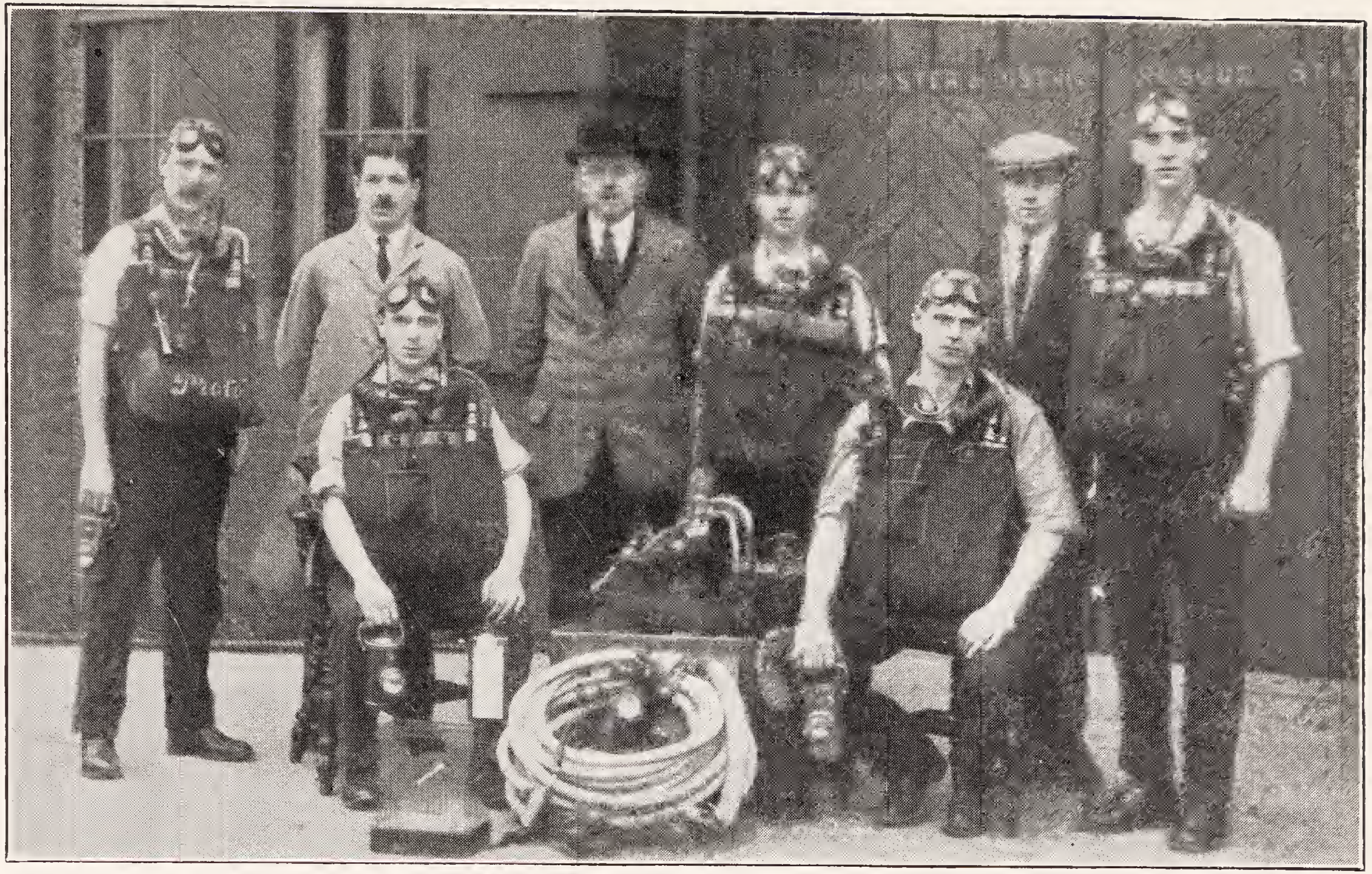
The course comprised lectures and demonstrations on—

1. Respiration, explanation of apparatus and assembling of parts and practical use of mouth-piece and nose-clip.

2. Symptoms of deficiency of oxygen with practical individual experience. Changing, testing and wearing rescue apparatus under dangerous conditions.



MEMBERS OF THE LIVERPOOL PORT SANITARY STAFF WITH OXYGEN BREATHING APPARATUS IN POSITION.



TRAINING OF STAFF ENGAGED IN POISONOUS GAS ATMOSPHERES, OR RESCUE WORK, AT THE DONCASTER AND DISTRICT RESCUE STATION.

3. Symptoms of excess of carbon dioxide. Practical experience of excess of this gas.

4. Changing of oxygen cylinders, use of signals in connection with the appliance, wearing apparatus in irrespirable atmosphere for two hours on several occasions under heavy physical exertion.

5. Detection of presence of poisonous gases by various means, and exposure in gas chamber, wearing the apparatus.

6. Care of apparatus, including cleaning, storage and minor repairs.

7. Reviving apparatus. Emergency use of reviving apparatus. Negotiating difficult situations in rescue work.

Venereal Diseases.

The Royal Commission on Venereal Diseases which reported in 1916 made the first suggestions for grappling with these diseases. The recommendations may be summarised as follows:—

1. That opportunities should be afforded to sufferers to have free and expert treatment.

2. That extended facilities should be provided for the diagnosis of these diseases.

3. That information as to the dangers of Venereal Diseases should be disseminated and particulars as to the facilities provided for free treatment.

It is now five years since free treatment centres and arrangements for expert diagnosis were established under the Liverpool Venereal Diseases Scheme.

The following summarises the work of the Treatment Centres for the year 1922.

The Clinics which were established are very serviceable and popular. Patients attending the Out-Patients' Department of the Hospitals and those suffering from Venereal Diseases are directed to the Department dealing with their special ailment, and particular care is taken that such patients suffering from Venereal Disease are not singled out or made conspicuous.

The Clinics now in operation are—The Royal Infirmary, the Royal Southern Hospital, the David Lewis Northern Hospital and the Stanley Hospital.

During the year under review, there were 3,552 new patients, male and female, a reduction of 1,347 as compared with the figure for 1921. A suggested explanation of this reduction is that on account of unemployment and other industrial conditions, there was a lack of means. But apart from this, the value of efficient free treatment and education is beginning to make itself evident.

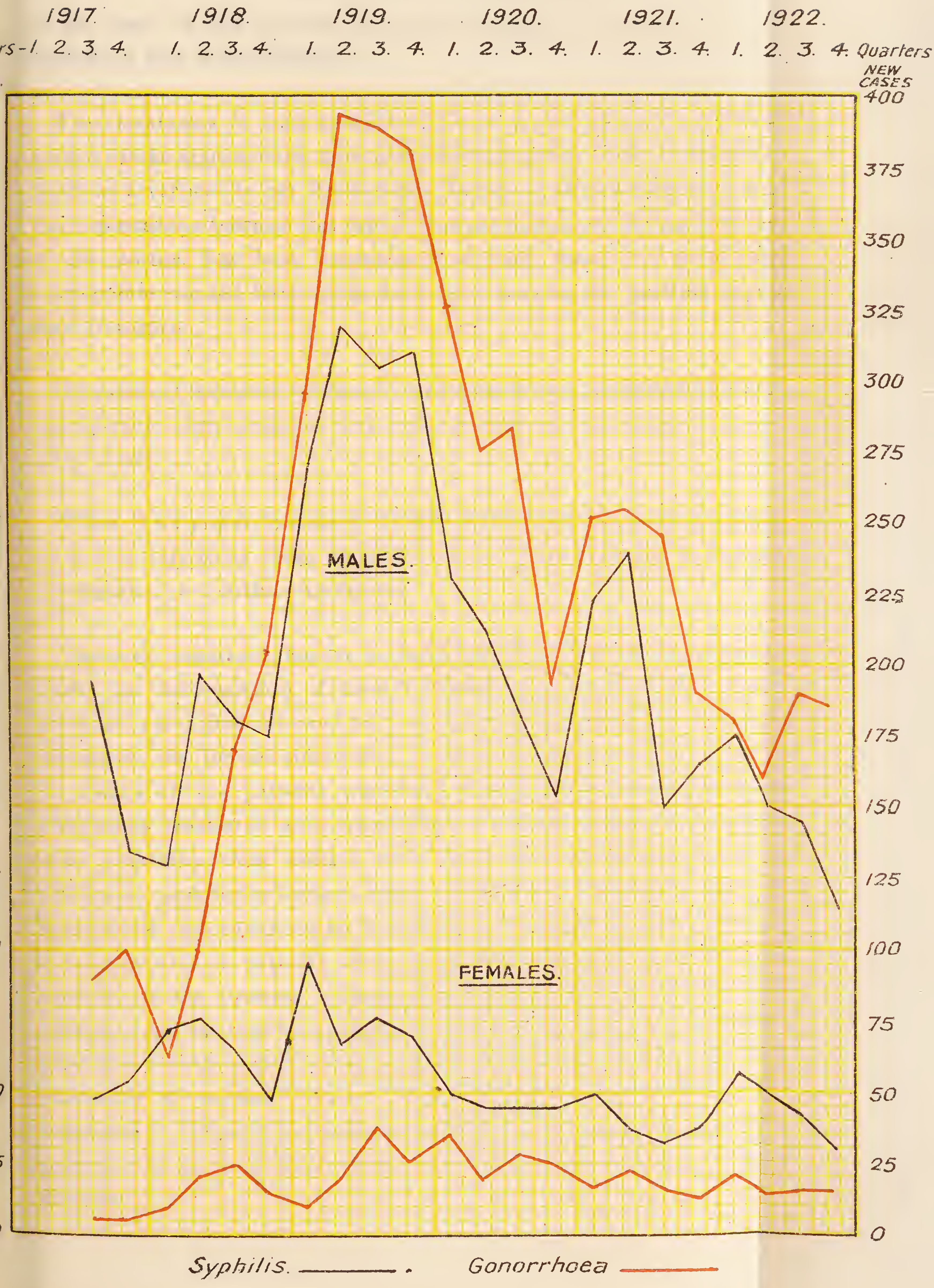
The attendances for the year at all the Clinics totalled 47,773, male and female. A table shewing attendances, etc., at each of the clinics is given, and also details of the diseases and sexes dealt with at the largest centre, namely, the Royal Infirmary.

As will be seen from the accompanying chart, it is satisfactory to note that following the marked rise at the end of the war in the number of cases in 1919, there has been a gradual reduction in the new cases attending the free treatment centre at the Royal Infirmary, which is the largest clinic in the city; corresponding reductions have taken place at the other clinics. We may take it, therefore, that Venereal Disease is once more, as before the war, declining. This is largely due to the effects of prompt and free treatment and advice given at the centres to sufferers, and the general concentration on the education of the community in regard to the nature and dangers of these diseases.

Defects of the Scheme.—As will be seen from the table appended, large numbers of patients give up treatment when the local manifestations of the disease have subsided, and as there is no compulsion exercised over patients to continue this treatment, such persons frequently remain in an infectious condition and consequently a great danger to the public. There is therefore the outstanding fact that nearly

ROYAL INFIRMARY.

Chart showing new cases of Venereal Diseases since the opening of the Clinic on 8th. August 1917.



50 per cent. of the patients give up attendance before they can be considered free from infection.

Free treatment is only availed of for such periods as the affected person thinks appropriate, to be discontinued at will. Efforts have been made in Liverpool to get the patients back to continue treatment, and the importance of steady and continuous attendance under the guidance of the doctor, has been emphasised in each case. In some cases appropriate worded letter-cards have been sent to the patients asking them to return.

At present, therefore, although clinics have been established at very considerable cost, patients may come and go as they please, or not come at all.

There is no power to compel a patient who is known to be suffering, in a very infectious form, from any one of these diseases, to undergo treatment or to continue treatment.

The very important Report of the Committee on Venereal Diseases, under the chairmanship of Lord Trevethin, has just been issued, and upon the point just referred to, viz., the tendency of patients to cease treatment, the Report states that "closer investigation shows that by no means all the patients who have discontinued attendance before completing treatment were infectious. A large number of syphilis cases attending these centres were from the commencement of the treatment, past the infectious stage. Further, in gonorrhœa cases the standard of cure suggested by the Ministry of Health is very high, and to comply with it patients must be treated long after bacteriological evidence of the presence of gonococci has disappeared. Many cases classed as having failed to complete treatment appeared to have ceased attendances with negative bacteriological tests for gonococci, and it is reasonable to suppose that a fair proportion of these were non-infectious." The fact, however, remains, that this defaulting of patients is an important factor in the spread of the venereal diseases.

The problem of the educational and propaganda work in venereal diseases has engaged the attention of the Council during the year, and it has been felt for some time that new arrangements must be made so that this work shall be carried out by the bodies directly responsible for dealing with the other branches of the subject. The Medical Officer reported to the Committee as follows:—

VENEREAL DISEASES—PROPAGANDA WORK.

Adverting to the following resolution of the Venereal Diseases Sub-Committee of April 16, 1923, relating to the methods of carrying out propaganda in connection with the prevention of venereal diseases, viz. :—

> "That the Medical Officer report on the matter to the next meeting of this Special Sub-Committee, and that in the meantime a copy of such Report be sent to each member,"

the Medical Officer begs to submit the following observations:—

The subject—in its various aspects—of the prevention of venereal diseases has engaged the attention of the Councils of the various Merseyside Boroughs through Committees specially appointed for the purpose, and, as a result of consultations and communications between those bodies, agreements have been reached as to the procedure which it is desirable to follow in regard to the prevention of these diseases.

The work of propaganda, which perhaps may have been regarded as relatively unimportant, has been outside the purview of these Committees, the work having been carried out by a voluntary body in association with the National Council for Combating Venereal Diseases, by means of funds subscribed by the various Riparian Authorities, viz., Liverpool, Birkenhead, Bootle, and Wallasey.

As the Committee are aware, the Chairmen of the various Health Committees, together with the Medical Officers of Health, have been, and continue to be, in conference upon other important matters affecting the co-ordination of Merseyside Health Administration, and in regard to venereal diseases it will be fresh in the memory of the Committee that a line of procedure has already been approved by the Merseyside Authorities in regard to necessary legislation affecting venereal diseases.

The Medical Officer is of opinion that all propaganda work specifically dealing with the prevention or treatment of venereal diseases should be carried out by the bodies who are directly responsible for dealing with all other aspects of the question.

The Ministry of Health have now sanctioned the erection of a "Seamen's Dispensary" in the neighbourhood of the Sailors' Home, where facilities will be provided for the diagnosis and treatment of ailments associated with seafaring life. Where cases come under notice of a character more suitable for other general hospital treatment, such cases will be transferred to an institution where these complaints are treated.

The building is now in course of erection, and will meet a much needed want in the neighbourhood of centres where sailors and others connected with seafaring life usually congregate.

TOTAL NUMBER OF NEW CASES OF VENEREAL DISEASE AND THE ATTENDANCES AT THE VARIOUS CITY CLINICS DURING THE YEAR 1922.

Hospital.	Date of opening.	New cases. *	Attendances.	Number of Patients on the books.	Ceased to attend before cure completed.
al Infirmary	1/8/1917	2,195	29,217	3,696	1,285
al Southern	7/9/1917	542	5,335	1,128	272
id Lewis Northern	23/6/1919	477	8,259	757	404
ley	7/7/1919	338	4,962	893	122

CLASSIFICATION OF CASES ATTENDING THE LIVERPOOL ROYAL INFIRMARY DURING 1922.

	New Cases. *			Ceased to attend before Cure Completed.			Total Attendances.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Syphilis	653	204	857	537	129	666	11,651	3,189	14,84
Gonorrhœa	789	87	876	570	49	619	11,830	1,187	13,01
Soft Chancre	3	—	3	—	—	—	27	—	27
Suspected cases—examined and found to be free from V.D.	385	74	459	—	—	—	1,191	142	1,33
Total	1,835	365	2,195	1,017	178	1,285	24,699	4,518	29,21

* The figures in these columns include "Re-admissions," *i.e.*, old patients who had ceased attending for more than six months.

The occupations followed by patients registered at the Clinics at the Royal Infirmary during the year are of interest:—

Males.		Females.	
Seafaring people	575	Housewives	143
(Of these 46 were foreign)		Home duties	56
Artizans	529	Unemployed	2
Miscellaneous	317	Shop Assistants	10
(Clerks, Agents, Hawkers, &c.)		Factory Hands	5
		Housemaids	4
		Waitresses	4
		Domestic Servants	10
		Other occupations	15
	1,421		257

In addition, 335 male and 86 female patients who had ceased attending for 6 months (or longer) resumed their attendances during the year.

40 per cent. of the total male patients registered were seafaring people.

8·0 per cent of the latter were not natives of the British Isles, and are classified as follows:—

U.S.A. and Canada, 13; Colonies, 8; Norway and Sweden, 9; other nationalities, 16.

The ages range approximately from 15 to over 60 years, but the majority of the patients were between the ages of 20 and 30 years, as shown by the following table, viz.:—

	Male.	Female.
10—15	—	6
15—20	54	22
20—25	421	74
25—30	356	38
30—35	243	29
35—45	232	40
45—55	88	18
55—65	21	3
65 upwards	5	1

Correct diagnosis being very important, arrangements have been made with the City Bacteriologist to examine material, and the following extract from his Report gives the numbers and particulars of the specimens examined for the Liverpool Clinics, Hospitals and Private Practitioners:—

Detection of Spirochaetes	34
Detection of Gonococci	516
Wasserman Reaction for Syphilis	5,121

As the majority of the specimens are sent from patients suspected to be suffering from Syphilis, or undergoing treatment, several specimens of blood may be sent from one case at different times, and, therefore, any percentages as to positive and negative results would be of no value.

The following drugs have been issued to Institutions and Medical Practitioners by the Department during the year 1922:—

ISSUE OF DRUGS TO CLINICS, HOSPITALS AND PRIVATE PRACTITIONERS DURING 1921 FOR THE TREATMENT OF VENEREAL DISEASES.

Issued to	Neokharsivan.					Novarsenobillon.					Novarsenobenzol. C.					Galyl.				Kharsiban	
	0·30	0·45	0·60	0·75	0·90	0·15	0·30	0·45	0·60	0·80	0·15	0·30	0·45	0·60	0·90	0·15	0·20	0·30	0·40	0·40	0·60
Royal Infirmary ...	—	—	6	24	—	—	—	—	—	—	—	873	—	2606	61	—	—	—	—	—	—
Southern Hospital	132	192	312	132	216	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Northern Hospital	264	276	240	—	192	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Stanley Hospital	1153	—	120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Edge Lane Hospital ...	60	—	48	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total Clinics	1009	468	726	156	408	—	—	—	—	—	—	873	—	2606	61	—	—	—	—	—	—
Prison Hospital	—	—	—	—	—	20	460	600	320	50	—	—	—	—	—	—	—	—	—	—	—
Walton Institution	—	—	48	—	—	30	260	200	320	220	—	—	—	—	—	—	—	—	—	—	—
Cancer and Skin Hospital ...	96	—	12	—	—	—	10	—	20	—	—	—	—	—	—	—	—	—	6	—	—
Brownlow Hill Hospital ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6
Eye and Ear Hospital ...	—	—	—	—	—	—	90	100	—	—	—	—	—	—	—	—	—	—	—	—	—
Belmont Road Hospital ...	—	—	132	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
New City Hospital	12	—	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fazakerley Sanatorium ...	24	—	24	—	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lower Breck Road Hospital	—	—	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alder Hey Hospital ...	288	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	30	—	—	—
Total Hospitals	420	—	240	—	12	50	820	900	660	270	—	—	—	—	—	—	6	30	6	6	6
26 Private Practitioners	360	264	426	132	60	—	10	—	20	—	2	11	2	29	2	18	42	62	54	—	—
Grand Total	2389	732	1392	288	480	50	830	900	680	270	2	884	2	2635	63	18	48	105	60	6	6

		To Clinics.	To Practitioners.	To Hospitals.
Total Number of Doses of	Neokharsivan	3,367	1,242	672
,, ,, ,,	Novarsenobillon ...	—	30	2,700
,, ,, ,,	Novarsenobenzol. C. ...	3,540	46	—
,, ,, ,,	Galyl	—	176	42
,, ,, ,,	Kharsivan	—	—	12

Approximately one-eighth of the drugs enumerated above have been issued to 26 medical practitioners who applied for them.

The Trevethin Committee reported as follows on the best medical measures for preventing venereal diseases in the civil community:—"Upon the evidence we conclude that the success of any general public facilities for self-disinfection is likely in the civil community to be very small. At the same time, in the face of the fact that disinfection, in the case of an individual user, if properly and promptly applied, will in all probability be successful, we do not think that there is any justification for putting obstacles in the way of individuals who desire to procure the necessary disinfectants, and we think the law should be altered so as to permit properly certified chemists to sell *ad hoc* disinfectants, provided such disinfectants are sold in an approved form; and with instructions for use approved by some competent authority." The Committee suggest that the Medical Research Council should be invited to undertake this task. They think, however, "that the commercial advertisement of *ad hoc* disinfectants should be prohibited."

The Committee emphasized that, speaking broadly, the general medical practitioner is not yet adequately equipped with the most advanced knowledge of venereal diseases and their treatment to enable him to deal competently with all the cases that come before him, and that an improvement in medical education in regard to venereal diseases is necessary. In the new regulations of the General Medical Council it is set out that no student will be admitted to the final examination for practice in medicine or surgery unless it is certified that he has been efficiently instructed in the diagnosis of venereal diseases, both clinically and in the laboratory. This is an advance which has been generally felt to be very necessary.

The Committees of the Corporation of Liverpool which deal with prevention and treatment of venereal diseases, have for some years been aware that any person who is suffering from venereal disease should not only seek medical advice, but also, so long as he is in an infectious condition, should continue to follow the instructions of his medical adviser.

Furthermore, it has been suggested that the deliberate infection of another person, by one who knows he is suffering from venereal disease should, in itself, be a penal offence, quite apart from any question of rape or indecent assault.

It will also be observed that mere notification of the disease is a proposal of an entirely different character, and one which has already been dealt with in previous reports.

If it can be brought home to the patient that it is his duty to himself and to his fellow men to follow a full and proper course of treatment until free from liability to infect others, much good will be attained.

The Liverpool City Council think these ends can be reached by making it obligatory to everyone who suffers, or suspects he is suffering, to seek medical advice and to follow the doctor's instructions; in no case will secrecy be betrayed, and it would only be in cases of deliberate discontinuance that prompt action would be taken by the Health Authority in the public interest.

The problem of the application of compulsory treatment and, if necessary, detention upon those who suffer was fully considered by the Trevethin Committee. The principle of the present system is to maintain secrecy and encourage sufferers to come for treatment and to continue treatment. The Committee thinks that in the present state of public opinion any system of general compulsory notification would tend to concealment and prove a backward step.

TABLE SHEWING NUMBER OF CASES OF SMALLPOX IMPORTED INTO LIVERPOOL, THE NUMBER OCCURRING IN THE CITY, AND THE PROPORTION REMOVED TO HOSPITAL DURING THE YEARS 1881—1922.

Year.	Imported by Sea or Overland.	Reported in the City.	Removed to Hospital.	Percentage Removed.
1881	16	246	199	79·95
1882	7	60	56	83·58
1883	12	114	105	83·33
1884	11	821	743	89·30
1885	11	364	342	91·2
1886	2	232	215	91·88
1887	2	21	23	100·0
1888	9	18	19	73·73
1889	8	1	8	88·88
1890	2	—	2	100·0
1891	10	11	21	100·0
1892	10	167	177	100·0
1893	12	63	73	97·33
1894	6	223	227	99·12
1895	7	130	117	98·15
1896	7	3	10	100·0
1897	2	4	6	100·0
1898	9	8	16	94·11
1899	6	4	10	100·0
1900	32	124	154	98·71
1901	20	17	37	100·0
1902 1903	A considerable outbreak occurred in the City during 1902 (560 cases) and 1903 (1720 cases) the vast majority of cases were due to infection from persons, or things within the City rather than fresh importations by sea or overland.			
1904	7	20	27	100·0
1905	6	9	15	100·0
1906	9	10	19	100·0
1907	4	15	19	100·0
1908	5	2	7	100·0
1909	6	3	9	100·0
1910	4	6	10	100·0
1911	17	2	19	100·0
1912	2	2	4	100·0
1913	12	1	13	100·0
1914	2	—	2	100·0
1915	—	—	—	—
1916	7	—	7	100·0
1917	1	2	3	100·0
1918	2	—	2	100·0
1919	7	13	20	100·0
1920	4	6	10	100·0
1921	—	—	—	—
1922	2	2	4	100·0

The above table is of interest as showing the constant importations of smallpox into a large seaport, and the consequent developments in the city. These experiences are true of all ports, and indicate the necessity for administrative vigilance in dealing with these importations.

TABLE 7.

INFECTIOUS DISEASE.

The actual number of cases of Infectious Sickness landed from vessels arriving in the Port of Liverpool during the years 1921 and 1922, and the comparison with the average of the preceding 10 years, is shown in the following table :—

Diseases.	Number of Cases.		Average for the 10 years preceding 1921.
	1921.	1922.	
Smallpox	0	2	4·8
Scarlatina	10	18	13·0
Cerebro-Spinal Meningitis	0	0	0·0
Poliomyelitis	0	0	0·0
Typhus	0	0	0·1
Enteric Fever	13	9	32·1
Do. (suspected)	5	0	5·6
Diphtheria	9	22	10·1
Measles	15	10	31·6
German Measles	0	0	1·7
Whooping Cough	0	0	0·0
Erysipelas	6	3	6·0
Chicken Pox	12	5	7·9
Cholera and Choleraic Diarrhœa.	0	0	0·3
Yellow Fever	0	0	0·3
Plague	0	0	0·2
Suspected Plague	3	0	1·4
Puerperal Fever	0	0	0·3
Phthisis	57	44	58·7
Tuberculosis (other forms of)	2	5	0·1
Anthrax	0	0	0·1
*Pneumonia and Influenza	15	8	10·8
*Malaria	28	24	10·9
*Trench Fever	0	0	0·0
*Dysentery	7	2	0·0
Totals	182	152	196·0

* Notifiable from 1st March, 1919.

TABLE 8.

INFECTIOUS DISEASE.

The number of cases of Infectious Sickness reported to have occurred on Liverpool-bound ships during the years 1921 and 1922, and which were disposed of prior to the arrival of the vessel at this port, and the average of such cases for the preceding 10 years, are as follows:—

Diseases.	Number of Cases.		Average for the 10 years preceding 1921.
	1921.	1922.	
Smallpox	12	4	18·1
Scarlatina	4	0	0·9
Cerebro Spinal Meningitis	0	0	1·2
Enteric Fever	19	10	15·1
Typhus	0	1	0·1
Para-Typhoid	0	0	0·0
Diphtheria	6	1	3·1
Measles	28	14	11·9
German Measles	0	2	0·5
Erysipelas	0	1	1·2
Chicken Pox	8	7	4·4
Cholera and Choleraic Diarrhœa	0	1	3·7
*Malaria	537	379	119·7
Yellow Fever	0	0	1·1
Plague	0	0	2·1
Suspected Plague	0	0	0·4
Phthisis	8	11	5·8
Tuberculosis (other forms of)	6	2	0·9
*Pneumonia and Influenza	29	21	6·1
*Dysentery	7	6	0·8
Anthrax	0	1	0·1
Totals	664	461	197·2

* Notifiable from 1st March, 1919.

The following Table gives particulars of the 272 vessels
Disease on Board, with the measures adopted in each case :—

TABLE 9.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 3	**Scythia** ...	New York ...	Phthisis ...	... ...
Jan. 3	**Bodnant** ...	West Coast of Africa	Malaria ... (19 cases)	... ...
Jan. 5	**Goldshill** ...	Alexandria ...	Small-pox ...	... ...
Jan. 7	**Gaffney** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Jan. 10	**Eurybates** ...	Java... ...	Malaria ...	... ...
Jan. 16	**Matoppo** ...	Colombo ...	Enteric Fever	... ...
Jan. 16	**Tortuguero** ...	Santa Marta	Enteric Fever	Garston ...
Jan. 16	**Oakmere** ...	West Coast of Africa	Malaria ... (5 cases)	... ...
Jan. 17	**Hector** ...	Yokohama ...	Phthisis ...	... ...
Jan. 19	**Vandyck** ...	Belfast ...	Erysipelas	Fazakerley ...
Jan. 21	**Linmere** ...	West Coast of Africa	Malaria ... (5 cases)	... ...

reported on their arrival as having, or having had, Infectious

REMARKS.
Patient proceeded to his home in Leeds.
Nineteen of the crew suffered from Malaria during the voyage.
This patient was left in hospital at Suez on 7th December, 1921, where the bedding and vessel were disinfected.
The two patients were members of the crew, and were removed to hospital at London.
The patient a member of the Chinese crew, was left in hospital at Java.
The patient, one of the crew, was left at Alexandria, and the bedding and vessel were disinfected.
The patient (a seaman) was admitted to the Garston Hospital, where he died.
All patients were members of the crew who had suffered during the voyage.
The patient, a cook, proceeded to his home in the City.
One of the crew, a seaman, who was removed to the City Hospital, Fazakerley.
The patients were five members of the crew who had suffered during the voyage.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 23	**Floridian** ...	New York ...	Enteric Fever	Mill Road Infirmary
Jan. 23	**Fordefjord** ...	West Coast of Africa	Malaria ... (2 cases)	(1) Northern (1) Royal Southern
Jan. 24	**Benue** ...	West Coast of Africa	Malaria ... (9 cases)	... ...
Jan. 25	**Ekarri** ...	West Coast of Africa	Malaria ...	... ...
Jan. 25	**Circassia** ...	Bombay ...	Pneumonia...	... ...
Jan. 27	**Diplomat** ...	Calcutta ...	Phthisis ...	... ...
Jan. 28	**City of Batavia**	Calcutta ...	Phthisis ...	Brownlow Hill Institution
Feb. 2	**Phrygia** ...	Alexandria ...	Pneumonia ..	... ...
Feb. 4	**Zaria** ...	West Coast of Africa	Malaria ... (9 cases)	... ...
Feb. 7	**Mahratta** ...	Calcutta ...	Chicken-pox (2 cases)	Port Hospital...
Feb. 7	**Ardeola** ...	Teneriffe ...	Pneumonia...	... ...
Feb. 7	**Ardeola** ...	Teneriffe ...	Phthisis ...	... ...
Feb. 8	**Winterswijk**	Buenos Ayres	Malaria ... (2 cases)	... ...

REMARKS

The patient, a seaman, was admitted to the Mill Road Infirmary, and the bedding and vessel were disinfected.

Two of the crew, a donkeyman and a fireman, were admitted to hospital, one to the Northern and one to the Royal Southern.

Nine of the crew suffered during the voyage.

One of the passengers had Malaria on the home passage.

A native (coal trimmer) who died on the voyage.

The patient, a native passenger, was left in hospital at Greenwich.

One of the crew, who was removed to hospital on arrival in Liverpool.

The patient, one of the crew, was landed at Alexandria.

Five passengers and four of the crew had suffered during the voyage.

The patients (Lascars) were removed to the Port Hospital, New Ferry. Disinfection carried out.

The patient, a passenger, died during the voyage.

This patient was landed at Teneriffe.

Two of the crew had suffered from Malaria during the voyage.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Feb. 8	**Benue** ...	West Coast of Africa	Malaria ..	... ...
Feb. 9	**City of Bombay**	Mombasa ...	Enteric Fever	Fazakerley ...
Feb. 14	**Montcalm** ...	St. John ...	Phthisis ...	... ...
Feb. 16	**Chindwin** ..	Rangoon ...	Phthisis ...	Royal Southern
Feb. 16	**City of Marseilles**	Bombay ...	Pneumonia... (2 cases)	... ...
Feb. 20	**Egori** ...	West Coast of Africa	Malaria ... (11 cases)	... ...
Feb. 24	**Baltic** ...	New York ...	Measles ...	Fazakerley ...
Feb. 25	**Rabymere** ..	West Coast of Africa	Malaria ... (6 cases)	... ...
Feb. 27	**Melita** ...	St. John ..	Malaria ...	Royal Infirmary
Feb. 27	**Flaxmere** ...	Sierra Leone	Malaria ...	... ...
Feb. 28	**Scindia** ..	Bombay ...	Pneumonia...	... ...
Mar. 2	**Clan Malcolm**	Beira ...	Malaria (2 cases)	... ...
Mar. 6	**Boma** ...	West Coast of Africa	Malaria ... (11 cases)	... ...

REMARKS.

This man was reported from his home in the City.

The patient, an apprentice, was removed to the City Hospital, Fazakerley, and the bedding and vessel were disinfected.

The patient, a passenger, proceeded to his home in Walthamstow.

The patient, a native, was removed to the Royal Southern Hospital.

Both patients died during the passage.

Eleven cases occurred amongst the crew during the voyage.

The patient, a child passenger, was removed to the City Hospital, Fazakerley. Disinfection carried out.

All patients were members of the crew who suffered during the voyage.

The patient was removed to the Tropical Ward, Royal Infirmary.

One of the crew had Malaria during the voyage.

The patient, a Lascar, died, and was buried at sea.

Two of the crew suffered during the voyage.

Eleven cases of sickness occurred amongst the crew.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Mar. 6	**Cedric** ...	New York ...	Phthisis ...	... ...
Mar. 6	**Cedric** ...	New York ...	Malaria ... (3 cases)	... ...
Mar. 9	**Andalusian**	Alexandria ..	Enteric Fever	... ...
Mar. 9	**Settler** ...	Pernambuco	Enteric Fever	Fazakerley ...
Mar. 13	**Cedric** ...	New York ...	Pneumonia...	Northern ...
Mar. 14	**Canada** ...	New York ...	Tuberculosis	Highfield Sanatorium
Mar. 14	**Canada** ...	New York ...	Measles ... (4 cases)	Fazakerley ...
Mar. 16	**City of Exeter**	Calcutta ...	Small-pox ...	... ...
Mar. 17	**Scotia** ...	Sierra Leone	Malaria ... (8 cases)	... ...
Mar. 17	**Ebani** ...	West Coast of Africa	Malaria . (11 cases)	... .
Mar. 18	**Eurypylus** ...	Yokohoma ...	Chicken-pox	... .
Mar. 20	**Cameronia** ...	New York ...	Measles ...	Fazakerley ..
Mar. 22	**Tritonia** ...	New York ...	Measles ...	Grafton Street

REMARKS

The patient proceeded to her home in Dublin.

Three members of the crew had suffered from Malaria during the voyage.

The patient was landed at Gibraltar and the usual disinfection was carried out.

The patient, the 2nd Officer, was removed to the City Hospital, Fazakerley. Disinfection carried out.

The patient, a second class passenger, was removed to the Northern Hospital.

The patient, a distressed British seaman, was admitted to the Highfield Sanatorium.

The patients, four children, were removed to the City Hospital, Fazakerley. Disinfection carried out.

The patient, a native seaman, was landed at Suez, where vaccination and disinfection were carried out.

Eight of the crew had suffered from Malaria during the voyage.

All patients were members of the crew who had suffered during the voyage.

The patient, a native fireman, had recovered on arrival in this port.

The patient, on arrival in this port, was removed to the City Hospital, Fazakerley. Disinfection carried out.

One of the crew, a seaman, having Measles, was removed to the City Hospital, South, and the bedding and vessel were disinfected.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
April 17	**Montcalm** ...	St. John's ...	Measles ...	Grafton Street
April 17	**Adriatic** ...	New York ...	Typhoid Fever	Fazakerley ...
April 18	**Canada** ...	Portland, Me.	Phthisis ...	... ...
April 19	**Hilarius** ...	Cape Town ...	Malaria ...	... ...
April 23	**Black Prince**	Alexandria ...	Pneumonia...	... ...
April 29	**City of Madras**	Alexandria ...	Enteric Fever	Fazakerley ...
April 29	**Trafford Hall**	Bombay ...	Small-pox ...	New Ferry ...
May 1	**Cedric** ...	New York .	Phthisis ... (2 cases)	... ...
May 1	**Empress of Britain**	Quebec ...	Tuberculosis	... ...
May 1	**Empress of Britain**	Quebec ...	Chicken-pox (1 case) Measles (1 case)	... ...
May 1	**Idomeneus** ...	China ...	Malaria ...	... ...
May 4	**Orcoma** ...	Bahia ...	Pneumonia...	... ...
May 4	**Orcoma** ...	Bahia ...	Chicken-pox	... ...

REMARKS

The patient was removed to the City Hospital, South, and the bedding and vessel were disinfected.

The patient, one of the crew, a carpenter, was removed to the City Hospital, Fazakerley, and the bedding and vessel were disinfected.

The patient proceeded to his home in Reading.

The patient, one of the crew, died and was buried at sea.

The patient was landed at Gibraltar on the home passage.

The patient, an apprentice, was removed to the City Hospital, Fazakerley, and the bedding and vessel were disinfected.

The patient, a Lascar, was removed to the Port Hospital, New Ferry, and the vessel and bedding disinfected.

These patients, both of whom were stewards on the vessel, proceeded to their homes in the City.

The patient proceeded to his home in Rock Ferry.

Both of these cases of sickness occurred on the vessel during the outward voyage.

One of the crew, a seaman, had suffered from Malaria during the voyage.

The patient died, and was buried at sea.

A steward had suffered on the homeward passage. The bedding and vessel were disinfected.

Date 1922,	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Mar. 24	**Cameronia** ...	New York ...	Erysipelas ...	Fazakerley ...
Mar. 25	**Melita** ...	St John ...	Malaria ...	... ...
Mar. 30	**Aguila** ...	Teneriffe ...	Pneumonia...	... ...
April 1	**Knowsley Hall**	Bombay ...	Measles ...	... ...
April 1	**Tritonia** ...	Savannah ...	Measles .	Grafton Street
April 3	**Chindwara** ...	Calcutta ...	Malaria ... (6 cases)	... ...
April 3	**Cedric** ...	New York ...	Phthisis ...	... ...
April 3	**Demodocus** ...	Shanghai ...	Leprosy ...	... ...
April 3	**Demodocus** ...	Shanghai	Phthisis ... (2 cases)	... ...
April 5	**Barracos** ...	West Coast of Africa	Malaria ...	.. ..
April 5	**Neotsfield** ...	Colombo ...	Malaria ...	... ...
April 5	**Arcos** ...	Windau	Phthisis ...	... ...
April 13	**Regina** ...	Portland, Me	Phthisis ...	.. ..

REMARKS.

The patient, one of the crew, a steward, was removed to the City Hospital, Fazakerley.

One of the passengers had suffered from Malaria during the voyage.

The patient was a third class passenger who had recovered on arrival of the ship at this port.

The patient, an apprentice, was left at Karachi.

One of the crew, suffering from Measles, was removed to the City Hospital, South, and the bedding and vessel were disinfected.

Six of the crew had suffered from Malaria during the voyage.

The patient proceeded to his home in London, and the bedding and vessel were disinfected.

The patient, a passenger, proceeded to London, and the bedding and vessel were disinfected.

The patients were two Pilgrims who died during the voyage.

One of the crew suffered from Malaria during the voyage.

One of the passengers had suffered from Malaria during the voyage.

The patient, a Russian fireman, was landed at Libau on the outward passage.

The patient was a clerk, who proceeded to his home in Belfast. The bedding and vessel were disinfected.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
May 4	**Appam** ...	West Coast of Africa	Malaria ... (3 cases)	... ...
May 4	**Zaria** ...	West Coast of Africa	Malaria ... (7 cases)	... ...
May 5	**Biafra** ...	West Coast of Africa	Malaria .. (6 cases)	... ...
May 5	**Ulysses** ...	Brisbane ...	Phthisis ... (2 cases)	... ...
May 10	**Alegrete** ...	Rio Janeiro...	Pneumonia...	... ...
May 14	**Montcalm** ...	Montreal ..	Phthisis ...	... ...
May 16	**Haverford** ...	Philadelphia	Malaria ...	... ...
May 16	**Telemachus...**	China ...	Malaria ... (6 cases)	... ...
May 16	**Telemachus...**	China ...	Pneumonia...	... ...
May 20	**City of Florence**	Glasgow ...	Mumps ... (2 cases)	Fazakerley ...
May 22	**Desna** ...	West Coast of Africa	Phthisis ..	Brownlow Hill Infirmary
May 23	**Novian** ...	New Orleans	Phthisis ...	Walton Institution Infirmary
May 23	**Berwickshire**	Australia ...	Phthisis ...	... ...

REMARKS

Three of the crew had suffered from Malaria during the voyage.

All patients were members of the crew who had suffered from Malaria during the voyage.

Six members of the crew suffered from Malaria during the voyage.

Both patients, members of the crew, proceeded to their homes. The bedding and vessel were disinfected.

The patient, a seaman, died during the voyage.

The patient proceeded to her home in Kent, and the bedding and vessel were disinfected.

One of the crew had suffered from Malaria during the voyage.

Six of the crew suffered from Malaria during the voyage.

The patient was an infant, a Pilgrim, who died on the 11th April.

The patients, two of the native crew, were removed to the City Hospital, Fazakerley.

The patient, a native seaman, was admitted to the Brownlow Hill Institution Hospital.

The patient, a distressed British seaman, was removed to Walton Institution Hospital, and the bedding and vessel were disinfected.

The patient was landed at Colombo on the homeward passage.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
May 24	**City of Paris**	Bombay ...	Dysentery ...	... .
May 24	**Linmere** ...	West Coast of Africa	Malaria ... (7 cases)	... ...
May 25	**Conway** ... School Ship	River Mersey	Scarlatina ...	Conway House, Rock Ferry
May 25	**Conway** ... School Ship	River Mersey	Diphtheria .. (4 cases)	Conway House, Rock Ferry
May 27	**Carmania** ...	New York ...	Measles ...	Fazakerley ...
May 29	**Montrose** ...	Montreal ...	Measles ... (2 cases)	... .
May 29	**Jotensfjell** ...	Christiania ...	Diphtheria ...	... ...
May 30	**Flaxmere** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
May 30	**Empress of Britain**	Quebec ...	Measles ... (3 cases)	... ...
June 2	**Conway** ... School Ship	River Mersey	Diphtheria . (2 cases)	Conway House, Rock Ferry
June 5	**Demerara** ...	Buenos Ayres	Pneumonia ...	Bootle Borough Hospital
June 5	**Demerara** ...	Buenos Ayres	Phthisis ...	... ...
June 5	**Manistee** ...	Santa Marta	Measles ...	... ...

REMARKS

The patient was a quartermaster, one of the crew who had suffered during the voyage.

The patients were all members of the crew who had suffered from Malaria during the passage.

The patient was one of the Cadets, who was removed and isolated in Conway House, Rock Ferry, and the bedding and vessel disinfected.

The patients, four boy Cadets, were all removed to Conway House, Rock Ferry.

The patient, a second class passenger, was removed to the City Hospital, Fazakerley, and the bedding and vessel disinfected.

Two patients suffered from Measles on the outward passage.

The patient was convalescent on arrival in this port, and proceeded to his home. The bedding and vessel were disinfected.

Two members of the crew suffered from Malaria during the voyage.

The patients were three children. They were landed at Gross Isle on the outward trip, and the bedding and vessel disinfected.

The patients, two boys, were removed and the bedding and vessel disinfected.

The patient was removed to the Bootle Borough Hospital, and the usual disinfection was carried out.

The patient died on the voyage, and was buried at sea.

The sickness occurred during the voyage, and the bedding and vessel were disinfected.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
June 5	**Adriatic**	New York	Measles (2 cases)	... ...
June 6	**Lyndefjord**	Port Sudan	Enteric Fever	... .
June 7	**Patani**	West Coast of Africa	Malaria (6 cases)	... .
June 8	**Derbyshire**	Rangoon	Smallpox	... ...
June 9	**Egba**	West Coast of Africa	Malaria (2 cases)	... ...
June 10	**Samaria**	Boston	Measles	... ...
June 10	**Olympia**	Bombay	Malaria (6 cases)	... .
June 12	**Overdale**	S. Georgia	German Measles	Borough Hospital, Birkenhead
June 13	**Antilochus**	Yokohama	Phthisis	... ...
June 14	**Aba**	West Coast of Africa	Malaria	... ...
June 14	**Scotia**	Calabar	Malaria	... ...
June 14	**Orita**	South America (West Coast)	Pneumonia	... ...
June 15	**Conway** School Ship	River Mersey	Diphtheria	Conway House, Rock Ferry

REMARKS.

The patients, two children, were landed at Queenstown on the home passage.

The patient, a seaman, was left in hospital at Port Said, and the bedding and vessel were disinfected.

The patients were all members of the crew who had suffered during the voyage.

The patient was landed at Malta on the 25th May. The crew were vaccinated and the vessel disinfected at Malta. All well on arrival here.

Two members of the crew suffered from Malaria during the voyage.

The patient, a passenger, was landed at Queenstown on the homeward passage, and the usual disinfection was carried out.

The patients were all members of the crew who had suffered from Malaria during the voyage.

The patient, the fifth engineer, was removed to hospital, and the usual disinfection was carried out.

Man Tow, fireman, suffering on arrival.

Two members of the crew suffered while on the voyage, and were well on arrival at Liverpool.

Two of the ship's seamen suffered from Malaria while on the voyage.

The patient was the sixth engineer, who was landed at Valparaiso, 3rd May, 1922.

The patient, a Cadet, was removed for isolation, and the bedding and vessel disinfected.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
June 15	**Benue** ...	West Coast of Africa	Phthisis (1 case) Malaria (11 cases)	... ...
June 16	**Conway** ... School Ship	River Mersey	Scarlet Fever	Fazakerley ..
June 20	**Benguela** ...	West Coast of Africa	Malaria ...	... ...
June 22	**Elmina** ...	West Coast of Africa	Malaria ... (5 cases)	... .
June 23	**Whakatane**...	Port Chalmers	Scarlet Fever	Fazakerley ...
June 24	**Montrose** ...	Montreal ...	Tuberculosis	... ...
June 26	**Nicoya** ...	Teneriffe ...	Diphtheria ...	City Hospital East, Mill Lane
June 26	**Cedric** ...	New York ...	Measles ...	... ...
June 27	**Appam** ...	West Coast of Africa	Malaria ... (5 cases)	... ...
June 28	**Egori**... ...	West Coast of Africa	Small-pox ... (?)	Port Hospital, New Ferry
June 28	**Egori**... ...	West Coast of Africa	Malaria ... (5 cases)	... ...
June 29	**City of Baroda**	Karachi ...	Pneumonia...	Borough Hospital, Birkenhead
June 29	**City of London**	Karach ..	Malaria (5 cases) Pneumonia (2 cases)	... ...

REMARKS.

The Phthisis patient, a second steward, was landed at Lagos. Eleven of the crew suffered from Malaria during the voyage, and were well on arrival at Liverpool.

A Cadet was removed to the City Hospital, Fazakerley, and the usual disinfection was carried out.

The patient, an able seaman, died and was buried at sea.

The patients were five members of the crew, who had recovered on arrival in this port.

The patient, a trimmer, was removed to the City Hospital, Fazakerley, and the bedding and vessel were disinfected.

The patient was a Finnish deport, who proceeded to Finland.

The patient, an apprentice, was removed to the City Hospital, and the bedding and vessel were disinfected.

The patient, a second passenger, was landed at Queenstown.

Five of the crew had suffered and recovered from Malaria during the voyage.

The chief steward was removed to the Port Hospital. The bedding and vessel were disinfected. The sickness proved to be non-infectious.

Five of the crew had suffered from Malaria during the voyage, and were well on arrival in this port.

The patient, a Lascar, was removed to hospital, and the usual disinfection was carried out.

Five of the crew had suffered from Malaria and two from Pneumonia during the voyage. The patients had recovered on arrival in this port.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
July 1	**Empress of Britain**	Quebec ...	Tuberculosis	... ...
July 1	**Conway** ... School Ship	River Mersey	Scarlet Fever	Conway House, Rock Ferry
July 3	**Conway** ... School Ship	River Mersey	Scarlet Fever (2 cases)	Conway House, Rock Ferry
July 5	**Conway** ... School Ship	River Mersey	Scarlet Fever	Conway House, Rock Ferry
July 6	**Conway** ... School Ship	River Mersey	Scarlet Fever (2 cases)	Conway House, Rock Ferry
July 7	**Aracayi** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
July 8	**Montcalm** ...	Montreal ...	Phthisis ...	... ...
July 8	**Haverford** ...	Philadelphia	Scarlet Fever	... ...
July 10	**Canada** ...	Montreal ...	Phthisis ...	... ...
July 10	**Albania** ...	Santa Cruz...	Phthisis ...	Belmont Road Institution
July 10	**Scindia** ...	Bombay ...	Mumps ...	... ...
July 13	**Conway** ... School Ship	River Mersey	Scarlet Fever	Conway House, Rock Ferry
July 13	**Conway** ... School Ship	River Mersey	Diphtheria ...	Conway House, Rock Ferry

REMARKS.	
The patient, a child passenger, proceeded to her home.	
A Cadet was removed for isolation.	Disinfection of bedding and vessel was carried out after the removal of patient.
Two Cadets were removed for isolation.	
One Cadet was removed for isolation.	
Two Cadets were removed for isolation.	
Two passengers had suffered from Malaria during the voyage, and were well on arrival in this port.	
The patient, a deport, proceeded to his home in London.	
The patient was a fireman. The sickness was notified from an address in the City, and the usual disinfection carried out.	
The patient, a third class passenger, proceeded to her home in Bermondsey.	
The patient was an able seaman, and was removed for medical treatment. The usual disinfection was carried out.	
The patient was a convalescent passenger, and proceeded on the journey.	
A Cadet was removed for isolation.	The bedding and vessel were disinfected.
A Cadet was removed for isolation.	

Date, 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
July 14	**Tydeus**	Japan ...	Phthisis ...	... ...
July 15	**Conway** ... School Ship	River Mersey	Scarlet Fever (3 cases)	Conway House, Rock Ferry
July 17	**Pegu**	Rangoon ...	Dysentery ...	... ...
July 17	**Pegu**	Rangoon ...	Small-pox ...	... ...
July 17	**Hadersley** ...	West Coast of Africa	Malaria ... (3 cases)	... ...
July 17	**Conway** ... School Ship	River Mersey	Scarlatina ...	Conway House, Rock Ferry
July 17	**Hadersley** ...	West Coast of Africa	Dysentery ... (2 cases)	... ...
July 18	**Tempus** ...	West Coast of Africa	Malaria ... (3 cases)	... ...
July 18	**Australia**	Bombay ...	Phthisis ...	Walton Institution Hospital
July 19	**Zaria**... ..	West Coast of Africa	Malaria ... (6 cases)	... ...
July 19	**Deseado** ...	River Plate...	Meningitis . .	Northern ...
July 21	**Nestor** ...	Yokohama ...	Enteric Fever	Fazakerley ...
July 23	**Megantic** ...	Montreal ...	Phthisis ...	... ...

REMARKS.

The patient was an able seaman, and proceeded to his home in Birkenhead.

Three Cadets were removed for isolation, and the bedding and vessel disinfected.

One of the passengers had suffered from Dysentery during the voyage.

The patient, a native steward, was landed on the 4th July, 1922, at Suez, where vaccination and disinfection was carried out.

Three of the crew suffered from Malaria during the voyage, and had recovered on arrival in this port.

The patient, a Cadet, was removed for isolation, and the bedding and vessel disinfected.

Two of the crew, having Dysentery, were left in hospital, one at Dakar and the other at Lagos.

Three of the crew had suffered from Malaria during the home passage.

The patient, one of the crew, a steward, was removed to hospital, and the bedding and vessel disinfected.

Four passengers and two of the crew had suffered from Malaria during the voyage.

The patient, a passenger, was removed to the David Lewis Northern Hospital.

The patient, a steward, was removed to the City Hospital, and the bedding and vessel disinfected.

The patient was a third class passenger, who proceeded to his home in Nottingham.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
July 24	**Northumberland** ...	Montreal ...	Mumps ...	... ...
July 26	**Massilia** ...	Bombay ...	Malaria ... (2 cases)	... ...
July 27	**City of Oxford**	Alexandria ...	Phthisis ...	... ...
July 29	**Polyphemus** ...	Java ...	Malaria ... (6 cases)	... ...
July 29	**Orcoma** ...	Valparaiso ...	Chicken-pox	... ...
July 31	**Canopic** ...	New York ...	Phthisis ... (2 cases)	Brownlow Hill Institution (1 patient)
Aug. 1	**Desna** ...	River Plate...	Phthisis ... (2 cases)	Brownlow Hill Institution
Aug. 1	**Hortensius** ...	River Plate...	Malaria ... (27 cases)	... ...
Aug. 2	**Barranca** ...	Jamaica ...	Diphtheria ...	City Hospital East, Mill Lane
Aug. 3	**Tatsumo Maru**	Colombo ...	Enteric Fever	Fazakerley ...
Aug. 5	**Pittsburgh** ...	New York ...	Phthisis ...	... ...
Aug. 7	**Parisiana** ...	Boston ...	Enteric Fever	Fazakerley ..
Aug. 8	**Copenhagen**...	West Coast of Africa	Malaria ... (4 cases)	... ...

REMARKS.

The patient, a steward, was medically attended on board ship.

Two of the crew suffered from Malaria during the voyage.

The patient, a soldier, died at Malta on the home passage.

All patients were members of the crew who had suffered from Malaria during the voyage.

A first class passenger suffered from Chicken-pox on the outward passage, and the usual disinfection was carried out.

One of the patients was removed to hospital, and the other, a passenger, proceeded to her home in Belfast.

One of the patients, a third class passenger, was landed at Lisbon, and the other, a seaman, was removed to Brownlow Hill Institution Hospital.

This vessel was detained nine days at Las Palmas, having twenty-seven of the crew suffering from Malaria; eight were sent ashore to hospital, but subsequently rejoined the vessel. All were well on arrival in this port.

The patient, a fireman, was removed to the City Hospital, and the bedding and vessel were disinfected.

One of the crew was removed to the City Hospital, and the usual disinfection was carried out.

The patient proceeded to his home at Oxford.

The third engineer, having Enteric Fever, was removed to the City Hospital, and the bedding and vessel were disinfected.

All patients were members of the crew who had suffered from Malaria during the voyage.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Aug. 9	**Boma** ...	West Coast of Africa	Malaria ... (9 cases)	... ...
Aug. 9	**Aba**	West Coast of Africa	Malaria ... (2 cases)	... ...
Aug. 17	**Cassandra** ...	Glasgow ...	Diphtheria ..	Fazakerley ...
Aug. 17	**Flaminian** ...	Alexandria ...	Plague ... (?)	... ...
Aug. 18	**Elysia** ...	Bombay ...	Phthisis ...	Brownlow Hill Institution
Aug. 19	**Oriana** ...	Callao ...	Chicken-pox	... ...
Aug. 22	**Appam** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Aug. 23	**Moora** ...	Bombay ...	Dysentery ...	... ...
Aug. 23	**Catalonia** ..	West Coast of Africa	Malaria .. (2 cases)	... ...
Aug. 23	**Linmere** ..	West Coast of Africa	Malaria ... (3 cases)	... ...
Aug. 24	**Maid of Hydra**	Glasgow ...	Malaria ...	Royal Infirmary
Aug. 26	**Media** ...	Newport (Mons)	Chicken-pox	... ...
Aug. 27	**Victorian** ...	Montreal ...	Pneumonia...	... ...

REMARKS.

Nine members of the crew suffered from Malaria during the voyage.

Two members of the crew suffered from Malaria during the home passage.

The patient, a Cadet, was removed to the City Hospital, and the bedding and vessel were disinfected.

The cook of this vessel was removed to hospital at Alexandria, and the blood test was negative.

One of the crew, a Lascar, was removed to hospital, and the usual disinfection was carried out.

The patient, a child, third class passenger, had suffered from Chickenpox during the voyage.

The patients were three members of the crew.

The patient was a native seaman, who was landed at Marseilles.

Two of the crew suffered from Malaria during the voyage.

All the patients were members of the crew who had suffered from Malaria during the voyage.

This patient, a fireman, was removed to the Royal Infirmary, and the bedding and vessel disinfected.

This patient was removed to hospital at Newport, where the disinfection was carried out.

The patient, a third class steward, died on the 15th August, 1922.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Aug. 27	**City of Simla**	Karachi ...	Malaria .. (9 cases)	... ...
Aug. 27	**Adriatic**	New York ...	Enteric Fever	Fazakerley ...
Aug. 27	**Suffolk** ...	New Zealand	Malaria ...	... ...
Aug. 29	**Justin** ...	Maranham ...	Enteric Fever	... ...
Aug. 30	**Durham Coast**	Glasgow ...	Diphtheria ...	... ...
Aug. 31	**Barracoo** ...	West Coast of Africa	Malaria ...	... ...
Sept. 2	**Blarney** ...	Wexford ...	Diphtheria ..	City Hospital East, Mill Lane
Sept. 2	**Montcalm** ...	Montreal ...	Phthisis ...	... ...
Sept. 4	**Celtic** ...	New York ...	Phthisis ...	... ...
Sept. 9	**Magellan** ...	Valparaiso ...	Malaria ...	... ...
Sept. 11	**Agapenor** ...	Calcutta ...	Tuberculosis	... ...
Sept. 18	**Greenbrier** ...	Kingston ...	Phthisis ...	... ...
Sept. 18	**Greenbrier** ...	Kingston ...	Pneumonia...	... ...

REMARKS

Two passengers and seven of the crew had suffered from Malaria during the voyage.

The patient, one of the crew, a steward, was removed to the City Hospital, Fazakerley, and the bedding and vessel disinfected.

One of the crew suffered from Malaria during the voyage.

The patient was removed to hospital at Para, where disinfection was carried out.

The patient was removed to hospital at Glasgow, and the bedding and vessel disinfected.

The patient, a deck boy, died at Grand Bassam.

The patient, a steward, was removed to the City Hospital, and the bedding and vessel were disinfected.

The patient proceeded to his home in Stepney.

The patient proceeded to his home in Birkenhead.

This patient, a seaman, was landed at Valparaiso.

The patient, the third officer, was left in hospital at Greenwich, and the usual disinfection was carried out.

The patient proceeded to his home in Ulverston, and the usual disinfection was carried out.

One of the crew had suffered from Pneumonia during the voyage.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Sept. 18	**Megantic** ...	Montreal ...	Enteric Fever (4 cases)	Fazakerley ... (1 patient)
Sept. 19	**Reading** ...	Sourabaya ...	Malaria ...	Royal Infirmary
Sept. 19	**Eboe**	West Coast of Africa	Malaria ...	... ...
Sept. 22	**Ekarri** ...	West Coast of Africa	Phthisis ...	... ...
Sept. 25	**Bendu** ...	West Coast of Africa	Malaria ... (8 cases)	... .
Sept. 25	**Johanna** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Sept. 30	**Ortega** ...	South America	Malaria ...	... ...
Oct. 2	**Mentor** ...	China ...	Dysentery ...	Royal Infirmary
Oct. 2	**Amarna** ...	Alexandria ...	Malaria ...	Royal Infirmary
Oct. 2	**Canada** ...	New York ...	Phthisis ...	... ...
Oct. 4	**Arracan** ...	Rangoon ...	Dysentery ...	... ...
Oct. 9	**Thessaly** ...	Rosario ...	Malaria ... (2 cases)	Royal Infirmary
Oct. 9	**Regina** ...	Montreal ...	Diphtheria ...	... ...

REMARKS.

Two of the patients were left in hospital in Montreal, one died on the passage, and the fourth patient was removed to the City Hospital, Fazakerley. The vessel and bedding were disinfected.

The patient, one of the crew, was removed to the Tropical Ward, Royal Infirmary.

One of the crew had suffered from Malaria during the voyage.

The patient, a passenger, proceeded to his home in Ireland.

All patients were members of the crew who had suffered from Malaria during the voyage.

Two members of the crew had suffered from Malaria during the voyage.

The patient, a passenger, had Malaria during the voyage.

This patient, one of the crew, a steward, was removed to the Royal Infirmary, and the usual disinfection was carried out.

The patient, a steward, was removed to the Royal Infirmary.

The patient proceeded to his home in Bournemouth.

The patient, a Lascar, was left in hospital at Hamburg, and the bedding and vessel were disinfected.

The patients, the fourth engineer and a fireman, were removed to the Royal Infirmary, and the usual disinfection was carried out.

A child passenger had suffered from Diphtheria on the outward passage, and the usual disinfection was carried out.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Oct. 9	**Regina** ...	Montreal ...	Pneumonia ...	Northern
Oct. 9	**Salaga** ..	West Coast of Africa	Malaria ... (6 cases)	... .
Oct. 9	**Conway** ... School Ship	River Mersey	Pneumonia ...	Royal Southern
Oct. 11	**Torcello** ...	Lisbon ...	Pneumonia ...	... ...
Oct. 13	**Maindy Grange**	Bombay ...	Malaria ... (5 cases)	... ...
Oct. 16	**Keemun** ...	Yokohama ...	Choleraic-Diarrhœa	... ...
Oct. 20	**Rochelle** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Oct. 21	**City of Cairo**	Glasgow ...	Pneumonia ...	... .
Oct. 23	**Siam City** ...	New York ...	Enteric Fever	... ...
Oct. 23	**Burma** ...	Rangoon ...	Malaria ...	... .
Oct. 24	**Coma** ...	Lisbon ...	Chicken-pox	... ...
Oct. 25	**Castalia** ...	Bombay ...	Broncho-Pneumonia	Brownlow Hill Institution
Oct. 25	**Demerara** ...	Buenos Ayres	Measles ...	... ...

REMARKS.

A passenger suffering from Pneumonia was removed to the David Lewis Northern Hospital.

Six members of the crew had suffered from Malaria during the voyage.

The scullion of this vessel, having Pneumonia, was removed to the Royal Southern Hospital.

The patient was a cabin boy, who was left at Lisbon.

Five members of the crew were left in hospital at Bombay. All well on arrival here.

The ship's surgeon reported that a Chinese fireman died from Diarrhœa during the voyage. The sickness was supposed to be Cholera. A new crew was taken on and no further sickness occurred.

Two of the crew having Malaria were landed at Seccondee.

The patient, one of the crew, was taken into hospital at Glasgow. He recovered and rejoined the vessel.

One of the crew suffering from Enteric Fever was left in hospital at Dover, and the bedding and vessel were disinfected.

The patient, one of the crew, had suffered from Malaria during the voyage.

The patient was left in hospital at Lisbon, and the bedding destroyed.

One of the crew, a steward, was removed to the Institution Hospital, and the usual disinfection was carried out.

The patient, a Portuguese child, was landed at Lisbon, where disinfection was carried out.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Oct. 28	**Montcalm** ...	Montreal ...	Phthisis ...	... ...
Oct. 28	**Orcoma** ...	Valparaiso ...	Broncho-Pneumonia	... ...
Oct. 29	**Canada** ...	Montreal ...	Pneumonia...	Northern ...
Oct. 30	**Holbein** ...	Buenos Ayres	Pneumonia...	... ...
Oct. 30	**Ansonia** ...	New York ...	Phthisis ...	.. ..
Oct. 30	**Ansonia** ...	New York ...	Measles ...	... ...
Oct. 30	**Celtic** ...	New York ...	Phthisis ... (3 cases)	... .
Oct. 31	**Oakmere** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Nov. 1	**Melville** ...	West Coast of Africa	Malaria ...	... ...
Nov. 3	**Prahsu** ...	West Coast of Africa	Malaria ... (4 cases)	... ...
Nov. 4	**Montclare** ...	Montreal ...	Tuberculosis	... ...
Nov. 6	**City of Calcutta**	Glasgow ...	Malaria ...	... ...
Nov. 8	**Scindia** ...	Bombay ...	Malaria ..	... ...

REMARKS.

The patient, a labourer, proceeded to his home in Durham.

The patient was a passenger, who proceeded to his home.

The patient, a passenger, was removed to the Northern Hospital, and the usual disinfection was carried out.

The patient died during the home passage.

The patient was a third class passenger, who proceeded to his home in Galway.

The patient was a child who had suffered from Measles during the voyage to New York, and the usual disinfection was carried out.

The patients proceeded to their homes.

Two engineers suffered from Malaria during the voyage.

A deck boy had suffered from Malaria during the home passage.

All patients were members of the crew who had suffered from Malaria during the voyage.

The patient proceeded to her home in Guildford, Surrey.

The captain of this vessel had suffered from Malaria during the passage.

A few cases of recurrent Malaria occurred during the voyage. All were well on arrival in this port.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Nov. 8	**Egba**	West Coast of Africa	Diphtheria ...	City Hospital, Mill Lane, Old Swan
Nov. 10	**Koranna** ...	Port Natal ...	Malaria ...	Royal Infirmary
Nov. 14	**Trewinnard**...	Rangoon ...	Enteric Fever	... ...
Nov. 14	**Ekarri** ..	West Coast of Africa	Malaria ... (2 cases)	... ...
Nov. 14	**Anglo Colombian**	Bombay ...	Malaria ... (7 cases)	... ...
Nov. 17	**Oriana** ...	Valparaiso ...	Typhoid Fever	... ...
Nov. 21	**Addington** ...	Patras ...	Typhus Fever ?	Fazakerley ...
Nov. 21	**Addington** ...	Patras ...	Typhus Fever	... ...
Nov. 22	**Mayumbe** ...	West Coast of Africa	Malaria ...	Royal Infirmary
Nov. 24	**Aba**	West Coast of Africa	Malaria .. (2 cases)	Royal Infirmary
Nov. 24	**Conway** ... School Ship	River Mersey	Diphtheria ... (4 cases)	Conway House, Rock Ferry
Nov. 27	**Canada** . .	Montreal ...	German Measles	... ...
Nov. 27	**Barranca** ...	Kingston ...	Phthisis ...	... ...

REMARKS.

The patient, one of the crew, was removed to the City Hospital, East, and the bedding and vessel were disinfected.

The patient was admitted into the Royal Infirmary, and the usual disinfection was carried out.

This patient, a fireman, was left in hospital at Rangoon, where disinfection was carried out.

Both patients were members of the crew who had suffered from Malaria during the passage.

All patients were members of the crew, who were landed at Leith.

The patient, a third class passenger, was landed at Punta Arenas, and the usual disinfection was carried out.

The patient, one of the crew, a seaman, was removed to the City Hospital, Fazakerley. The sickness proved to be Typhoid Fever, and the bedding and vessel were disinfected.

One of the crew, an ordinary seaman, suffering from Typhus Fever, was landed at Algiers on the 10th November, and died in hospital on the 11th November, 1922.

The patient was removed to the Royal Infirmary, and the usual disinfection was carried out.

Two native passengers, suffering from Malaria, were removed to the Royal Infirmary, and the usual disinfection was carried out.

Four Cadets, having Diphtheria, were taken ashore for isolation to Conway House, Rock Ferry, and disinfection of bedding and vessel was carried out.

The patient, a child, had suffered from German Measles on the outward voyage to Montreal.

The patient, a steward, proceeded to his home in the City.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Nov. 27	**Celtic** ..	New York ..	Phthisis . (2 cases)	... .
Nov. 28	**Linmere** ...	West Coast of Africa	Malaria ... (3 cases)	... ...
Nov. 28	**Pegu**	Rangoon ...	Malaria ...	... ...
Dec. 1	**Esneh** ...	Alexandria ..	Phthisis ...	... ...
Dec. 4	**Author** ...	Calcutta ...	Measles ...	Grafton Street City Hospital
Dec. 8	**Orita**... ...	Valparaiso ...	Tuberculosis	... ...
Dec. 8	**Orita**... ...	Valparaiso ...	German Measles	... ...
Dec. 8	**Orita**... ...	Valparaiso ...	Anthrax ..	... ...
Dec. 8	**Otto Sverdrup**	Bombay ...	Malaria ...	... ...
Dec. 11	**Trafford Hall**	Karachi ...	Malaria ...	... ...
Dec. 11	**Yorkshire** ...	Rangoon ...	Pneumonia...	... ...
Dec. 12	**Appam** ...	West Coast of Africa	Malaria ... (2 cases)	... ...

REMARKS.

Both of these patients proceeded to their homes in Liverpool and Newcastle respectively.

Three members of the crew had suffered from Malaria during the home passage.

One of the crew, a donkeyman, had suffered from Malaria during the voyage.

The patient was left in hospital at Gibraltar.

A Cadet on this vessel having Measles was removed to the City Hospital, Grafton Street, and the usual disinfection was carried out.

The patient, a child passenger, died on the outward passage.

The patient, a Cadet, was landed at Bilbao.

A Cadet, suffering from Anthrax, was landed at Colon, and the usual disinfection was carried out.

The patient, one of the crew, a Fireman, proceeded to his home in Norway.

One of the crew, the Marconi Operator, had suffered from Malaria during the voyage.

The patient, a native member of the crew died during the voyage. The body was puried at sea.

The 3rd Officer and 7th Engineer had suffered from Malaria during the voyage.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Dec. 17	**Navigator** ...	Maceio ..	Malaria ... (3 cases)	... ...
Dec. 18	**Ebani** ...	West Coast of Africa	Malaria ... (7 cases)	... ...
Dec. 18	**Poplar Branch**	West Coast of America	Enteric Fever	Fazakerley ...
Dec. 18	**Regina** ...	Halifax ...	Diphtheria ...	Fazakerley ...
Dec. 18	**Bavarian** ...	Alexandria ...	Erysipelas ...	... ...
Dec, 18	**Adriatic** ...	New York ...	Measles ...	... ...
Dec. 19	**Treglisson** ...	Rangoon, &c.	Malaria ... (8 cases)	... ...
Dec. 19	**Rabymere** ...	West Coast of Africa	Malaria ... (2 cases)	.. ..
Dec. 20	**Aviator** (Tug)	Widnes ..	Scarlatina ...	Fazakerley ...
Dec. 20	**Montcalm** ...	St. John's ...	Phthisis ...	... ...
Dec. 22	**Boma** ...	West Coast of Africa	Malaria ... (2 cases)	... ...
Dec. 27	**Canada** ...	Portland ...	Phthisis ...	... .

REMARKS.

The sickness occurred amongst the crew during the voyage.

Seven of the crew had suffered from Malaria during the voyage.

The patient, one of the crew, a Fireman, was removed to the City Hospital and the bedding and vessel were disinfected.

The patient, a lady passenger, and two of her family (contacts) were removed to the City Hospital and the usual disinfection was carried out.

This patient was landed at Alexandria.

The patient, who was convalescent on arrival at this port, proceeded to her home.

Eight of the crew had suffered from Malaria during the voyage. All were well on arrival at this port.

The patients were two of the crew who had suffered from Malaria during the voyage.

The patient, the mess-boy, was removed to the City Hospital and the usual disinfection carried out.

The patient proceeded to his home in Rotherham.

Two of the crew had Malaria during the passage home.

The patient, a polisher, proceeded to Birmingham.

Date 1922.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Dec. 28	**Fordefjord** ...	West Coast of Africa	Malaria ... (5 cases)	. ...
Dec. 30	**Montcalm** ...	St. John's ...	Small-pox ... (1 case)	Port Sanitary, New Ferry
Dec. 30	**Montclare** ...	St. John's ...	Small-pox (?)	Port Sanitary, New Ferry

REMARKS.

Five members of the crew had suffered from Malaria during the voyage.

The vessel arrived in this port from St. John's, New Brunswick, on the 20th of December, 1922, having a child on board, stated by the Ship's Surgeon to be suffering from Chickenpox (?). The child, with the mother and another infant, were removed to the Port Hospital and complete disinfection of the vessel, bedding, etc., was carried out. A list of the names and addresses of all on board was obtained and the Medical Officers of other districts being duly informed, those in this city were kept under observation.

A child—third-class passenger—was removed to the Port Hospital wth the father and mother. Forty-one of the crew were vaccinated and disinfection of the vessel carried out. The names and addresses of all on board were obtained. The sickness proved to be Chickenpox.

Diseases incident upon Sailors.—Sanitation of Vessels.

The diseases to which sailors are peculiarly liable may be classified under three headings.

(*a*) Those which are caused by the peculiar stresses of the work.

(*b*) Tropical Diseases.

(*c*) Those associated with the peculiar environment of the sailor, such as damp forecastles, the possibility of contaminated water supplies, and the close association of the sick with the healthy in the confined quarters on shipboard.

It is against the latter classes of diseases that the efforts of the Port Sanitary Authority for improving the sanitation of vessels are directed.

The defects are classified as under :—

(*a*) Faulty Construction.

(*b*) Wear and Tear.

(*c*) Lack of Cleanliness and Nuisance.

From the table facing page 80, it would at first sight appear that the conditions found on British ships were inferior to those found on foreign vessels. The explanation of this is that in regard to the British ships this is a home port and the crews are paid off on arrival, whereas the crews of foreign vessels remain on board. When a crew is paid off from a ship they almost invariably leave their quarters in a dirty and untidy condition. This accounts for the large proportion of defects and lack of clealiness reported on British vessels. When these ships are in foreign ports and the crews living on board the cleanliness of their quarters would compare very favourably with what may be found on ships of other nationalities in this port.

Canal Boats.

The Port Sanitary Inspectors have been appointed Canal Boat Inspectors under the Canal Boats Acts, 1877 and 1884. This is rendered necessary by the large number of Canal Boats which are to be found lying in the Liverpool Docks. By rotation, one Inspector devotes one whole day per week for a period of five months at a time to this work, as it has been found that in this way it is easier to follow up any boat that may be defective. These boats are for the most part kept in very good repair.

Five hundred and ninety-eight boats were inspected during the year of which 20 were found to have some condition contravening the regulations.

INSPECTION OF SHIPPING.

Year 1922.

TABLE 10.

Nationality.	Visits.	Re-visits.	Total.
British	3,639	1,283	4,922
Norwegian ...	211	94	305
Swedish... ...	100	42	142
Spanish... ...	91	40	131
Danish	77	31	108
Japanese ...	25	2	27
Italian	7	6	13
Portugese ...	6	6	12
Roumanian ...	1	—	1
French	37	8	45
Brazilian ...	10	10	20
Dutch	73	15	88
Greek	2	2	4
American ...	168	74	242
Belgian ...	4	3	7
German	12	7	19
Chilian	2	2	4
Peruvian ...	4	4	8
Finnish	30	5	35
Jugo Slav ...	1	—	1
Lettish ...	1	2	3
Polish	6	5	11
Total ...	4,507	1,641	6,148

SUMMARY OF INSANITARY CONDITIONS.

TABLE 11.

Class of Vessels.	Number Inspected.	Number on which nuisances were found.	Per cent.
FOREIGN—			
Steamers	3,592	677	18·84
Sailing	1	—	—
Total...	3,593	677	18·84
COASTWISE—			
Steamers	857	16	1·86
Sailing	57	5	8·77
Total...	914	21	2·29

Nationality.	Number Inspected.	Number on which Nuisances were found.
British	3,639	612
Foreign	868	86
	4,507	698

Nuisances arising through

Defects of Orginal Construction. (*a*)	Per cent. of Total Defects.	Structural Defects through wear and tear. (*b*)	Per cent. of Total Defects.	Dirt, and other conditions prejudicial to health.	Per cent. of Total Defects (*c*)
42	1·42	243	8·24	2,662	90·33

TABLE 12.

THE FOLLOWING TABLE SHOWS THE NUMBER AND NATIONALITIES OF THE VESSELS ON WHICH DEFECTS WERE DETECTED DURING THE YEAR 1922.

NATIONALITY.	Number of Ships.	Dirty Forecastles.	Dirty Wash-houses, Store-houses, etc.	Foul Water Casks.	Foul Bilges.	Foul W.C's.	Accumulations of offensive refuse.	Gear stowed in Crew's Quarters.	Damp Quarters.	Water lodging on top of Forepeak Tank.	Animals kept, causing nuisance.	Leaky Decks overhead.	Defective Stoves.	Defective Bulkheads.	Defective Ports and Sky-lights.	Defective Ventilators.	Defective Flooring Boards	Defective Hatches and Lockers.	Defective Chain Pipes.	Defective Hose Pipes.	Defective W.C. Fittings.	Defective Soil Pipes.	Inadequate Ventilation.	Inadequate Lighting	Inadequate Drainage.	Bare Iron not Sheathed	W.C's. deficient in Ventilation and situation bad.	Total number of Defects.	Total Remedied.
British ...	612	1759	121	2	...	601	5	1	9	...	...	58	5	7	87	8	...	3	3	5	47	5	18	5	3	3	7	2762	2693
Norwegian ...	26	14	1	...	...	28	...	...	...	...	...	1	...	...	...	4	...	...	...	...	2	...	...	...	2	...	2	54	48
Swedish ...	14	18	1	..	...	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	29	27
Spanish ...	11	19	...	...	...	11	...	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..	...	30	30
Polish... ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Peruvian ...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
Greek ...	2	10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	10	10
Chilian ...	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
American ...	19	3	3	...	...	22	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29	29
French ...	1	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Finn	2	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...	3	3
Danish ...	5	2	...	...	...	2	...	...	...	...	...	4	...	...	3	...	...	...	...	...	1	...	...	..	...	...	...	12	9
German ...	2	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
Portugese ...	1	4	...	...	...	2	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	6	6
Total ...	698	1840	126	2	...	678	6	1	9	...	...	63	5	7	90	12	...	3	3	5	50	5	20	5	5	3	9	2947	2867

Aliens.

The object of the medical examination of Aliens under the Aliens Order, 1919, is the exclusion of those (*a*) whose presence is likely to be a danger to the public health of this country; or (*b*) who are likely to become a charge on public funds either by reason of their existing or probable future incapacity to support themselves and their dependants, or because their condition is such as to render it probable that they will need treatment and care which they are unable to provide from their own resources.

The extent of the medical examination, which is carried out by the Assistant Port Medical Officers, varies with the class of passenger, with his reasons for coming to this country, and the probable duration of his stay here. The great majority of alien passengers arrive from the U.S.A. and are either visitors on business, or coming to see relatives in this country, or tourists. Amongst such passengers it is only necessary to exclude lunatics, idiots or mental defectives, and those suffering from communicable diseases. But in the case of aliens who intend to make a prolonged stay, or intend to settle permanently in this country, the extent of the examination must be sufficient to detect any condition likely to render such aliens a public charge. It is impossible to discover every case of disease which comes into this category, for the Medical Inspector naturally does not receive any assistance from the passenger under examination, whose one idea is to get on shore as quickly as possible and to avoid disclosing anything which is likely to interfere with his landing. The Medical Officer must therefore make his decision on such physical signs as he is able to discover. The difficulties of diagnosis under such circumstances are obvious. For example, early phthisis may be suspected, but there is no opportunity of a period of observation, no history of cough, loss of weight, etc., will be given by the patient, the question of whether or not the alien should be allowed to land must be decided then and there on physical signs alone. In regard to other diseases which may seriously affect the future of the alien, the position is equally difficult. It is inevitable that there should be some cases which escape detection, for the responsibility of informing a passenger that not only is he suffering from some serious malady which he did not suspect, but also that in consequence he will not be allowed to land and must return whence he came by the first available ship, is not lightly to be undertaken. In practice the difficulty is to some extent overcome by close co-operation with the Immigration Officers. In the course of their examination they may obtain information of previous sickness, of a voyage undertaken for reasons of health, of mental deficiency, etc., which are a valuable guide to the Medical Inspector. Moreover, in cases where serious disease is suspected, but a certain diagnosis cannot be made, the Medical Officer's suspicions are communicated to the Immigration Officer, who may limit the period for which the alien is permitted to stay in this country, and may enquire more closely into his financial circumstances to make certain that possible sickness would not render him chargeable to public funds. In addition, the findings of the Medical Officer, while not sufficient to justify rejection on medical grounds alone, may turn the scale against an alien whom the Immigration Officer has in other respects found unsatisfactory.

Consequently the small number of certificates issued cannot be taken as fairly representing the work of the Medical Inspectors. Undoubtedly the existence of a system of inspection of all aliens entering the country will deter many undesirables from ever attempting to land here, and probably the Poor Law Institutions and the Police could give comparisons with pre-war days which would more fairly demonstrate the value of the Aliens Order than do the figures of aliens rejected throughout the ports in this country. But even on the latter basis of working out the cost of administration per alien rejected some account should be taken of the expense of maintaining such aliens, particularly if they are suffering from mental or physical disease, and of the moral and physical harm that they might do in this country.

The following table of aliens arriving in Liverpool during 1922 will give a good idea of the class of passenger arriving. The standard is much higher than may be experienced in ports with a cross-channel connection with the Continent. The journey from America is not so easily undertaken by the undesirable as is the short voyage from the Continent. On the other hand, the hardship involved in rejection is correspondingly greater and the responsibility of the Medical Officer correspondingly increased.

During the year 1922 there arrived at Liverpool 22,863 alien passengers. The following table shows how this total is divided amongst the various classes into which incoming aliens are grouped by the Immigration Department of the Home Office :—

Visitors on Holidays, Tourists, etc.	Business Visitors.	In transit to other Countries.	Aliens normally resident in this country and returning after being abroad.	Aliens coming to reside permanently in this country.
14,597	1,172	1,795	376	552

Aliens holding Ministry of Labour Permits to take up employment in this country.	Diplomats and Persons on Foreign Government Missions.	Seamen under Contract to join Ships in British Waters.	Other Seamen.	Transmigrants.
34	108	156	150	3,924

Medical Certificates were issued in regard to 13 Aliens, 4 on account of Infectious Disease, and 9 on account of Lunacy, Idiocy and Mental Deficiency.

Verminous Persons.

Typhus Fever, which is a vermin transmitted disease, is present in Poland and the neighbouring Continental countries; it has caused the Ministry of Health and also the American Health Authorities to view the arrival of emigrants and trans-migrants from these countries en route to America with some anxiety.

The Emigration houses where these people are housed, pending the sailing of the vessel, are kept under strict supervision by the Lodging-House Inspectors; they are visited daily, and all cases of infectious illness promptly reported to the Shipping Company's doctor and the Local Health Authority. The bedding is also frequently examined and attention is given to the occupation of the rooms to prevent over-crowding and to ensure cleanliness. The Medical Officer of Health, at the request of various Shipping Companies, arranged that certain Polish and other emigrants, together with their effects, should be bathed and disinfected.

The bathing of these persons has been carried out at the Netherfield Road and Sparrow Hall Hospitals, where an ample number of baths are available. The disinfectors of the hospitals, which are of large size, are if necessary, utilised for the destruction of vermin in the clothing and belongings of these persons. The cost of the disinfection is defrayed by the Shipping Company concerned. As a rule, the alien immigrants and trans-migrants arriving in the Port of Liverpool on inward-bound vessels are in a clean condition, and do not require the cleansing referred to.

Supervision of Food Importations.

The inspection of imported foodstuffs under the Unsound Food and Foreign Meat Regulations, 1908, is carried out by a staff of seven Food Inspectors. The quantity of food imported into Liverpool is so enormous that it is obvious that inspection in the first place can only be by a process of sampling, only those consignments which appear unsatisfactory on the first examination being further inspected. In actual practice the Port Sanitary Staff of Food Inspectors become well acquainted with the various " marks " indicating the origin of the food products and they know from previous experience what may be safely trusted to be sound and of good quality and what requires to be more carefully examined. Moreover, as they are constantly at work on the docks and know personally the various people connected with food importation they are able to acquire valuable information of any consignments which appear unsatisfactory on discharge from the ships.

The official information of the quantities and kinds of foodstuffs arriving in the Port is obtained from the Customs Bill of Entry and, in regard to certain classes of meat, from the Detention Notes which are issued by the Examining Officers of H.M. Customs. But to inspectors who have years of experience on the docks many other unofficial, but none the less valuable sources of information are available.

The preliminary sampling is usually carried out in the dock sheds alongside the ship, and for this purpose the inspector can require any packages to be opened and the contents exposed for his inspection. If these prove satisfactory the whole consignment is passed, if unsatisfactory the scope of the examination is extended and when necessary the whole consignment may be gone through. This cannot be done in the transit sheds on the docks and consequently the foodstuffs are released from the quay and detained again in a warehouse or cold store where the examination can be completed. Very large quantities of foodstuffs, particularly frozen offal and canned goods are dealt with in this way. Samples of preserved foods (such as peas, beans, etc.,) are analysed for the presence of preservatives and colouring matter which are prejudicial to health. The presence of metallic contamination in canned goods is also enquired into and the brine from pickled foods is from time to time examined for prohibited chemical preservatives. These examinations are carried out by the City Analyst.

The quality and condition of the frozen meat imported into Liverpool is generally excellent, and it is now seldom that any is condemned, except in cases where the refrigerating machinery has broken down and decomposition of the cargo resulted or where moulds have grown upon the meat so as to render it unsound. In addition brine sometimes escapes from the refrigerating pipes and causes considerable damage to foodstuffs. Where this damage is only superficial, carcases of meat are allowed to be trimmed under the supervision of the Inspectors.

Under the Foreign Meat Regulations it is forbidden to import severed portions of the carcase of a pig or other edible parts of a pig which have not before importation been salted, cured, pickled, dried or smoked, or otherwise prepared as bacon or ham, and which are not contained in a box, case, receptacle or package with an official certificate impressed thereon or affixed or attached thereto.

Such "official certificate" is one which is accepted as evidence "that the cattle or pig from which the meat is derived has been certified by a competent authority in the place of origin to be free from disease at the time of slaughter, and that the meat has been certified by the like authority to have been dressed or prepared and packed with the needful observance of all requirements for the prevention of danger arising to public health from the meat as an article of food."

During 1922 the list of countries from which such certificates are accepted has been increased by the addition of the United States of America, Brazil, and Argentina. Large quantities of pork loins bearing these certificates have been imported during the year. The food inspectors have the right of examining these products in spite of the certificate.

Several consignments of boneless beef, which did not comply with the requirements regulating the importation of this class of meat, have arrived during the year. These have all been thawed out and every piece examined.

In the latter part of the year several consignments of Ox Livers from South America were found to be very unsatisfactory, a large percentage being diseased. Representations to the importers have resulted in an improvement of the quality of subsequent consignments from the same source.

Evaporated Milk arriving from a War Dump in France and at least four or five years old was carefully examined. Numerous tins were blown and burst and some examined by the City Analyst were found to contain as much as 4·0 grains of tin per pound.

There have been several arrivals of lunch tongues and canned pork from U.S.A., "prepared from meat passed for sterilisation." Export notices were served in regard to these and the goods returned to the country of origin.

During the year a quantity of tinned lobster was destroyed as it was found to contain 5·5 grains of tin per pound. Export notices were issued in regard to—

Canned Peas containing	3·63 grains of Copper per lb.		
Canned Beans containing ...	8·57	,,	,,
Canned Vegetables	3·0	,,	,,

Frozen Pigs' Feet which bore no official certificate.

Unsound foodstuffs are whenever possible allowed to go for industrial purposes. Great care is taken that these foods are not marketed for human consumption, and only well-known and reliable firms are allowed to receive them for use in the manufacture of poultry foods, dog biscuits, etc, and for melting down for fat extraction purposes.

One inspector devotes his whole time to the inspection of imported fruit. During the year large quantities of Valencia oranges have arrived in much better condition than has usually been the case in recent years. This is due to more careful packing and transport in ships specially fitted for the trade.

Jaffa oranges have also shown improvement in their condition on arrival. Owing to the longer sea passage and consequent great danger of the fruit becoming unsound the boxes of Jaffa oranges are all opened on the quays and the waste removed before delivery.

Californian fruits have arrived via the Panama Canal, in large quantities. Apples landed in good condition, but pears were in many cases decomposing, one consignment of over 4,000 boxes having to be destroyed.

Australian apples arrived in large quantities. In regard to one ship the experience of last year was repeated, 4,000 cases of apples being landed, which on external examination appeared sound, but which on section were found to be rotting from the centre outwards, and all had to be destroyed.

A cargo of onions from Egypt arrived in June in very bad condition due to having been shipped at Alexandria in an immature condition.

During June and July large consignments of bananas from the Canary Islands arrived in bad condition and were destroyed. This is an unusual experience during the summer months.

The following table shews the number and description of samples sent for examination to the City Analyst and City Bacteriologist during the year ending December, 1922 :—

TABLE 13.

CITY ANALYST.	
Canned Goods—	
Milk	4
Mixed Vegetables ...	5
Peas	52
Egg Yolk	1
Sardines	—
Haricot Beans	16
Mutton	1
Beef	5
Lobsters	2
Bottled Peas	1
Jelly Fruit	1
Salt	3
Flour	2
Ox Livers	2
Shredded Wheat	1
Hide Cuttings...	1
Brine	7
Rats	14
Total ...	118

CITY BACTERIOLOGIST.	
Canned Goods—	
Lobster	2
Tomatoes...	—
Pears	—
Pelotas	—
Milk	4
Peaches	—
Mussels	10
Cockles...	4
Wool	16
Sausages	6
Oysters...	1
Total ...	43

Twenty-seven samples of tinned and potted foodstuffs were examined, of which 3 were found to be sterile, 5 contained putrefactive organisms, 3 staphylococci and 15 contained B. coli. The shellfish were satisfactory with the exception of the 4 samples taken from Moreton shore—in each of these there were innumerable B. coli.

TABLE 14.

SHOWING THE NUMBERS OF CATTLE, SHEEP, AND SWINE EXPORTED FROM IRELAND TO LIVERPOOL DURING THE YEAR 1922, AND SHOWING THE PORTS IN IRELAND AT WHICH THE ANIMALS WERE SHIPPED.

	Cattle.	Sheep.	Swine.
Ballina	24	6,599	358
Belfast	2,799	7,230	—
Cork	45,144	36,251	4,081
Drogheda	31,182	29,531	731
Dublin	120,801	203,978	12,565
Dundalk	14,323	43,587	2,435
Londonderry	8,180	22,889	82
Newry	1,352	22 952	115
Sligo	70	12,214	7,290
Waterford	35,811	31,225	3,562
Total	259,686	416,456	31,199

TABLE 15.

SHOWING THE TOTAL NUMBERS OF THE SEVERAL KINDS OF CATTLE, SHEEP AND PIGS EXPORTED FROM IRELAND TO LIVERPOOL DURING THE YEAR 1922.

CATTLE.	No.
Fat	207,021
Stores (for fattening)	43,033
Milch Cows	2,702
Springers	459
Calves	6,471
Total Cattle ...	259,686

SHEEP.	No.
Fat	177,614
Stores	14
Lambs	238,828
Total Sheep ...	416,456
PIGS.	
Fat	31,196
Stores	3
Total Swine ...	31,199

TABLE 16.

STATEMENT SHOWING THE NUMBER OF LIVE CATTLE, &c., LANDED AND SLAUGHTERED AT THE FOREIGN ANIMALS WHARF (BIRKENHEAD, ALFRED AND WALLASEY LAIRAGES) DURING THE YEARS 1905 to 1922 INCLUSIVE.

Year.	Landed.				Slaughtered.			
	Oxen.	Calves.	Pigs.	Sheep, Lambs and Goats.	Oxen.	Calves.	Pigs.	Sheep, Lambs and Goats.
1905	276,725	5	—	160,105	276,273	4	—	163,705
1906	270,853	5	—	94,948	270,245	5	—	95,250
1907	214,061	2	—	97,688	215,821	2	—	94,714
1908	180,283	—	—	76,334	179,872	—	—	79,315
1909	148,233	2	—	8,053	147,812	2	—	8,053
1910	89,613	3	—	304	90,430	—	—	304
1911	78,232	2	—	40,338	79,215	1	—	39,314
1912	19,167	—	—	14,251	19,167	—	—	14,251
	143,114	**819**	**69,016**	**335,291**	**140,854**	**810**	**67,586**	**334,880**
1913	3,482	—	—	—	3,482	—	—	—
	351,276	**930**	**104,274**	**449,344**	**90,857**	**174**	**15,498**	**131,241**
1914	—	—	—	1,707	—	—	—	1,707
	333,115	**248**	**65,242**	**357,528**	**171,716**	**121**	**16,876**	**158,562**
1915	**235,620**	—	**60,791**	**288,260**	**100,560**	—	**2,353**	**94,237**
1916	**270,117**	**2**	**84,509**	**377,753**	**137,346**	—	**2,210**	**134,794**
1917	**257,781**	**14**	**48,013**	**424,992**	**127,436**	**4**	**655**	**171,720**
1918	**178,898**	**17**	**28,723**	**446,039**	**102,174**	—	**409**	**219,915**
1919	**252,790**	**977**	**29,052**	**362,137**	**175,302**	—	**591**	**241,247**
1920	**247,015**	**6,230**	**31,050**	**341,350**	**110,688**	**9**	**569**	**164,669**
1921	**195,785**	—	**19,224**	**325,982**	**63,178**	—	**2,766**	**165,963**
	49,434	—	—	6,706	49,224	—	—	6,706
1922	**262,601**	**8**	**31,257**	**418,604**	**63,002**	**1**	**515**	**153,381**
	38,648	1	—	—	38,648	1	—	—

Ordinary type represents Foreign. Heavy type represents Irish.

TABLE 17.

SHOWING THE VALUES OF THE IMPORTS OF MEATS (EXCEPT POULTRY AND GAME) INTO THE PORT OF LIVERPOOL DURING THE YEARS 1915, to 1921.

Description.	Years.						
	1915.	1916.	1917.	1918.	1919.	1920.	1921.
	£	£	£	£	£	£	£
Bacon	10,719,819	15,827,493	18,181,829	36,832,954	38,708,464	21,746,024	13.472,791
Beef, fresh and refrigerated ...	11,378,711	8,880,454	8,297,884	16,470,701	11,916,393	17,754,543	13,430,866
Beef, salted...	70,777	67,426	86,563	66,238	180,015	—	—
Hams	3,383,667	4,114,569	3,983,618	6,843,531	7,404,202	109,461	4,225,544
Mutton, fresh and refrigerated ...	2,443,754	2,751,913	2,116,322	2,128,352	2,219,436	5,702,678	5,842,010
Pork, fresh and refrigerated ...	324,167	966,652	469,406	424,056	310,654	1,639,590	920,772
Pork, salted	71,083	85,791	56,604	17,544	100,808		
Rabbits	159,215	168,667	180,106	123,468	143,983	342,821	95,873
Unenumerated, fresh refrigerated and salted	801,044	1,101,843	1,214,946	930,022	2,588,273	973,877	678,012
Preserved, otherwise than by salting	1,941,040	3,663,457	6,160,807	9,443,132	13,012,291	2,638,774	1,253,263
Totals	£31,293,277	£37,628,265	£40,748,085	£73,279,998	£76,584,519	£50,907,768	£39,919,131

TABLE 18.

SHOWING THE QUANTITY OF UNSOUND MEATS SUPERVISED AND UTILISED DURING THE YEARS 1911 to 1922.

Year.	Beef.				Mutton.				Pork.			
	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.
1911...........	659	10	2	24	18	7	0	13	6	4	2	20
1912...........	684	8	3	0	475	12	1	2	9	12	3	18
1913...........	88	0	3	12	76	16	0	13	1	4	2	15
1914...........	441	5	2	0	47	5	2	2	1	5	0	2
1915...........	221	7	0	10	23	14	0	4	2	8	3	21
1916...........	103	16	0	13	4	10	0	24	1	14	1	16
1917...........	510	9	3	14	24	11	3	20	0	14	3	16
1918...........	281	9	0	25	55	15	0	22	4	14	1	4
1919...........	150	12	3	22	45	18	0	16	—	8	0	8
1920...........	30	8	2	23	95	8	0	6	—	16	0	16
1921...........	25	14	2	19	8	13	0	8	1	9	2	22
1922...........	44	18	1	19	10	9	1	8	2	12	1	18

TABLE 19.

SHOWING THE QUANTITY OF UNSOUND OFFAL SUPERVISED AND UTILISED DURING THE YEARS 1911 to 1922.

Year.	Beef.	Mutton.	Pork.	Veal.
1911......	32,816 pieces.	56,596 pieces.	8,629 pieces.	1,070 pieces.
1912......	68,272 ,,	57,163 ,,	8,229 ,,	196 ,,
1913......	28,055 ,,	66,705 ,,	12,946 ,,	64 ,,
1914......	36,561 ,,	41,298 ,,	1,919 ,,	44 ,,
1915......	55,219 ,,	185,551 ,,	5,644 ,,	233 ,,
1916......	63,900 ,,	126,110 ,,	2,765 ,,	15 ,,
1917......	39,466 ,,	13,212 ,,	12,460 ,,	946 ,,
1918......	27,216 ,,	51,755 ,,	24 ,,	——
1919......	103,613 ,,	61,844 ,,	76,814 ,,	19 ,,
1920......	207,412 ,,	358,744 ,,	261 ,,	722 ,,
1921......	31,695 ,,	32,989 ,,	3,699 ,,	100 ,,
1922......	30,794 ,,	26,991 ,,	5,129 ,,	15 ,,

DURING THE YEAR 1922.

Name of Organ.	Beef.		Mutton.		Pork.		Veal.	
	Number.	Weight, Pounds.	Number.	Weight, Pounds.	Number.	Weight, Pounds.	Number.	Weight, Pounds.
Livers	11,733	134,117	4,400	5,276	172	475	—	—
Kidneys	639	597	17,185	1,592	1,000	222	—	—
Tripe	397	4,079	—	—	—	—	—	—
Skirts	4,017	4,868	—	—	—	—	—	—
Hearts	9,336	33,035	700	416	—	—	—	—
Tongues	694	21,220	—	—	336	224	15	9
Tails	1,989	4,259	—	—	—	—	—	—
Heads	—	—	—	—	3,486	36,308	—	—
Lungs	—	—	2	3	—	—	—	—
Cheeks	1,874	4,048	—	—	—	—	—	—
Feet	—	—	—	—	132	382	—	—
Udders	115	814	—	—	—	—	—	—
Plucks	—	—	—	—	3	15	—	—
Brains	—	—	4,704	896	—	—	—	—
Totals	30,794	207,072	26,991	8,183	5,129	37,626	15	9

The organs dealt with above were rejected for various reasons, notably, decomposition and diseased conditions, such as Cysts, Inflammation, &c.

TABLE 21.

TABLE SHOWING THE QUANTITY AND DESCRIPTION OF UNSOUND MEATS SUPERVISED* DURING THE YEAR 1922.

Description.	Total Weight.				Cause of Destruction.											
					Tubercular.				Brine Stained, Mouldy and Decomposed.				Other causes. (Emaciation, Dropsy and Pleurisy).			
	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.	Tons	cwts.	qrs.	lbs.
Beef	44	18	1	19	—				41	11	2	13	3	6	3	6
Mutton	10	9	1	8	—				9	19	1	8	0	10	0	0
Pork	2	12	1	18	0	0	2	26	2	10	3	11	0	0	3	9
Veal	0	0	0	27	—				0	0	0	27	—			
Total	58	0	1	16	0	0	2	26	54	2	0	3	3	17	2	15

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* These were destroyed or allowed to go for industrial purposes to the satisfaction of the Medical Officer.

TABLE 22.

SHOWING QUANTITIES OF UNSOUND GENERAL FOODSTUFFS SUPERVISED AND UTILISED DURING THE YEAR 1922.

Description.	No. of Tins.	Weight in Pounds.	Description.	No. of Tins.	Weight in Pounds.
Canned Goods—			**Mutton** ...	1270	8209
Apples ...	106	636	Pork and Beans	8455	16910
Apricots ...	6429	13046	Ox Tongues ...	1365	5467
Apricot Pulp ...	6395	45139	Tripe	3	6
Raspberry Pulp.	32	448	Lobsters ...	1414	682
Blackberry Pulp...	40	560	Pilchards ...	2	2
Cherries ...	96	192	Sardines ...	6153	2631
Logan Berries	193	386	Salmon ...	2	2
Peaches ...	1323	2646	Crab	51	29
Peach Pulp ...	209	1254	Prawns ...	184	184
Pears	206	515	Milk Condensed.	39903	39903
Pear Pulp ...	642	3752	Milk Evaporated	1611	164
Pine Apple ...	13985	21951	Egg Pulp ...	2492	102784
Plums	31	77			
Black Currant Pulp...	32	448			
Figs	1244	2686			
Tomatoes ...	22027	76804			
Peas	6766	9069			
Beef (roast) ...	953	6118			
Beef	19613	115987			

Description.	Packages.	Weight.			
Fruit (Fresh)—		Tons.	Cwts.	Qrs.	Lbs
Apples	829	15	16	3	4
Melons	281	15	9	2	16

TABLE 22—*continued.*

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Fruit (Fresh) *continued*—					
Melons, loose	—	124	0	0	0
Pears	3,563	72	16	3	7
Bananas...	3,902	209	14	1	2
Grapes	276	7	6	3	4
Tomatoes	1,727	15	10	2	10
,, loose	4	4	0	0	0
Lemons	535	21	16	3	2
,, loose	—	14	2	2	0
Oranges	1,635	56	17	0	18
,, loose	—	444	18	0	16
Cocoanuts	174	9	17	0	12
Fruit (Dried)—					
Almonds	2	—	1	2	19
Figs	352	2	16	3	10
Currants, loose	—	2	1	0	9
Raisins	92	—	18	2	8

TABLE 22—*continued.*

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Vegetables—					
Potatoes...	2013	100	11	2	0
,, loose...	—	4	0	0	0
Onions	415	15	2	1	4
,, loose	—	4	0	0	0
Turnips	87	4	7	0	0
Cereals—					
Wheat	—	381	14	0	26
Maize	—	265	1	0	20
Oats	—	19	1	1	26
Barley	—	6	12	3	2
Peas	—	3	2	3	22
Beans	—	—	—	—	—
Flour	—	90	18	3	23
Rice		84	1	1	6
Corn Flour	—	2	1	1	0
General—					
Ham	—	—	—	2	18
Bacon	—	5	19	1	6
Poultry	—	—	7	3	3
Salmon	—	—	—	—	19
Anchovies	196	11	0	0	0
Rabbits	—	—	4	1	8

TABLE 22—*continued.*

Description.	Packages.	Weight.			
General—*continued.*		Tons.	Cwts.	Qrs.	Lbs.
Eggs (Single)	128,901	6	11	2	18
Eggs (Yolk)	128	24	9	0	23
Coffee	78	7	16	0	20
,, loose	—	—	1	0	9
Cocoa Beans	—	—	3	3	12
Frankfort Sausage	72	—	—	1	26

TABLE 23.

SHOWING THE TOTAL QUANTITIES OF THE DIFFERENT UNSOUND FOODSTUFFS SUPERVISED DURING THE YEAR 1922.

	Tons.	Cwts.	Qrs.	Lbs.
Beef, Muttonf Pork and Veal...	58	0	1	16
Offal (Beef, Mutton, etc.) ...	112	17	3	22
Canned Goods...	214	6	3	18
Fruit and Vegetables	1,146	5	2	1
Cereals	852	14	0	13
General (Fish, Poultry, Rabbits, etc.)	56	14	2	22
	2,440	19	2	8

TABLE 24.

Showing comparative Value of the more important Food Stuffs imported at the principal Ports during the year 1921.

	London. 1	Liverpool. 2	Hull. 3	Bristol. 4	Harwich. 5	Glasgow. 6	Manchester. 7	Southampton. 8	Leith. 9	Newcastle. 10
	£	£	£	£	£	£	£	£	£	£
Animals	91,696	—	—	—	—	—	—	—	—	—
Butter	21,257,519	1,836,531	2,247,862	134,800	3,283,849	98,975	198,554	2,709,315	2,586,080	3,837,919
Cheese	12,038,526	2,046,190	176,157	1,250,906	191,991	328,509	422,273	289,680	291,764	179,033
Cocoa	2,089,614	2,114,216	196,186	16,294	383,082	6,592	—	8,672	—	195,712
Coffee	1,894,194	54,738	—	417,098	—	—	—	38,415	—	498
Grain	37,189,047	21,216,004	14,774,662	11,008,965	9,778	10,185,718	8,207,844	1,216,756	5,998,232	2,663,203
Eggs	5,271,786	3,709,218	709,076	8,530	1,374,547	764,247	201,808	307,844	1,099,210	1,311,196
Fish	2,423,896	3,742,018	472,550	46,289	693,321	127,442	1.318	239,128	202,882	265,430
Fruit	16,238,360	13,282,438	2,136,886	3,170,065	418,244	2,687,840	1,574,083	1,917,543	317,988	545,517
Lard	2,225,084	4,982,624	694,082	710,806	102,035	429,490	1,053,610	147,126	82,359	—
Margarine	1,384,707	619,718	1,925,377	—	983,240	80,261	20,530	—	594,624	363,899
MEAT :—										
Bacon	6,273,287	13,472,791	3,264,228	957,297	11,732,573	1,123,175	1,285,035	1,745,231	192,129	1,120,300
Beef	24,585,002	13,430,866	65,581	419,685	—	611,021	346,248	1,710,186	—	15,458
Hams	1,229,117	4,225,544	—	242,656	—	1,850,809	197,259	135,155	—	—
Mutton	21,711,268	5,842,010	219,770	205,612	229,910	23,067	346,944	372,855	—	—
Pork	1,166,717	920,772	—	—	311,080	—	—	—	—	—
Rabbits	419,000	95,873	—	—	—	—	8,866	—	—	—
Unenumerated	2,684,110	678,012	347,816	90,543	460,712	198,530	—	19,150	410,674	194,851
Preserved		1,253,263	13,012	44,130	—	—	—	—	—	
Milk, Condensed	6,870,740	1,102,786	1,132,543	314,227	18,770	23,746	650,517	66,017	252,850	481,869
Poultry and Game	149,679	266,138	11,740	—	58,636	—	—	85,757	—	—
Sugar	16,325,063	10,670,488	1,306,370	1,982,102	—	833,468	1,462,043	280,642	1,231,237	705,967
Vegetables	4,131,866	2,063,030	1,123,815	144,565	337,164	269,763	336,765	2,439,389	221,093	153,943

EMIGRATION.

There was a marked decrease in the number of emigrants leaving the Port of Liverpool during the year 1922, the number being 120,691, a decrease of 40,441 compared with the previous year, when the number of emigrants leaving the Port was 161,132.

The following is a return of the number of emigrants and clearances of ships, including those passenger vessels in which medical inspection was not required, from 1901-1922:—

TABLE 25.

In	1901,	167,452	Emigrants, and	761	Clearances of Ships.
,,	1902,	214,113	,,	791	,,
,,	1903,	265,918	,,	902	,,
,,	1904,	274,584	,,	924	,,
,,	1905,	277,536	,,	983	,,
,,	1906,	352,818	,,	1,090	,,
,,	1907,	385,797	,,	1,102	,,
,,	1908,	212,155	,,	1,113	,,
,,	1909,	253,400	,,	1,117	,,
,,	1910,	336,088	,,	1,149	,,
,,	1911,	312,027	,,	1,153	,,
,,	1912,	323,187	,,	1,165	,,
,,	1913,	347,541	,,	1,199	,,
,,	1914,	232,954	,,	1,065	,,
,,	1915,	75,387	,,	677	,,
,,	1916,	58,749	,,	562	,,
,,	1917,	18,908	,,	379	,,
,,	1918,	13,588	,,	287	,,
,,	1919,	120,187	,,	673	,,
,,	1920,	204,868	,,	769	,,
,,	1921,	161,132	,,	714	,,
,,	1922,	120,691	,,	804	,,

The following Tables, Nos. 26 and 27, relating to Emigration have been kindly supplied by the Board of Trade.

TABLE 26.

Statement showing the number of Passengers (Emigrants and others), distinguishing British subjects and Aliens, that left the Port of Liverpool for places out of Europe in the year 1922 :—

DESTINATION.	British Subjects.	Aliens.	Total.
British North America ...	38,328	10,561	48,889
Australia and New Zealand	2,592	25	2,617
British South Africa ...	763	16	779
India (including Ceylon)...	5,294	270	5,564
Other British Colonies and Possessions ...	5,901	466	6,367
Total British Empire ...	52,878	11,338	64,216
United States	26,407	22,957	49,364
Other Foreign Countries	6,213	898	7,111
Total Foreign Countries ...	32,620	23,855	56,475
Grand Total ...	85,498	35,193	120,691

TABLE 27.

Number of Passengers (Emigrants and others), distinguishing British subjects and Aliens, as given in Table No. 26, that left the Port of Liverpool in each month of the year 1922 :—

MONTH.	British Subjects.	Aliens.	Total.
January	3,624	1,168	4,792
February	3,816	996	4,812
March	5,628	1,628	7,256
April	8,296	1,943	10,239
May	6,863	1,525	8,388
June	6,465	2,065	8,530
July	6,752	2,781	9,533
August	10,036	7,358	17,394
September...	12,514	7,522	20,036
October	9,972	3,596	13,568
November	7,194	2,299	9,493
December	4,338	2,312	6,650
Total	85,498	35,193	120,691

Emigrant Inspections.

All emigrants travelling second class or steerage on board vessels outward bound are subject to inspection by the Medical Officers of the Board of Trade, Dr. Tinker and Dr. Rentoul. The crews of all such vessels bound for America are also subjected to inspection by these officers. An Inspector of the Port Sanitary Authority attends these clearances in order to supervise the removal of all persons who may be rejected on account of actual or suspected infectious disease.

There were 146 such inspections, and 19 persons were rejected on account of infectious disease.

TABLE 28.

Date 1922.	Name of Vessel.	Nature of Sickness.	Where taken to	Description of Patient.
April 13	**Canopic** ...	Trachoma ...	Returned Home	Adult
„ 21	**Montcalm** ...	Impetigo ...	„ „	Adult
„ 22	**Canada** ...	Ringworm ...	„ „	Child
May 12	**Empress of Britain**	Sycosis ...	„ „	Adult
„ 13	**Canopic** ...	Fibroid Tubercle...	Boarding House, Duke Street	Adult
„ 23	**Adriatic** ...	Chicken-pox ...	Returned Home	Adult
„ 23	**Haverford** ...	Scabies ...	„ „	Adult
„ 26	**Minnedosa** ...	Ringworm ...	„ „	Infant
June 1	**Carmania** ...	Measles	Fazakerley Hospital, ...	Infant
Aug. 31	**Carmania** ...	Chicken-pox ...	„ „ ...	Infant
Sept. 23	**Megantic** ...	Barber's Rash ...	Returned Home	Adult
„ 30	**Adriatic** ...	Scabies ...	Boarding House, Duke Street	Adult
Oct. 21	**Andania** ...	Favus ...	Boarding House, Gt. George Square	Adult
Dec. 9	**Baltic** ...	Measles ...	Grafton Street Hospital...	Child
	„	Scabies ...	Returned Home	Adult (1) Children (3)
„ 15	**Cedric** ...	Observation ...	Boarding House	Adult

The numbers of Transmigrants notified from other Port Sanitary Authorities, or discovered upon examination in Liverpool to be suffering from "Trachoma," from January 1st to December 31st, 1922, were :—

Cases notified from Hull	71
,, ,, ,, London	1
,, ,, ,, Grimsby	1
,, ,, ,, Southampton	1
,, ,, ,, Dover	2
,, deported ,, Canada	2
	78
Discovered by the Medical Officers attached to the various Steamship Companies	28
Total number of cases ...	106

Number of above who sailed for U.S.A. and Canada ...	88
,, ,, ,, ,, were returned home	12
,, ,, ,, diverted to Southampton	5
,, ,, ,, under treatment in Liverpool ...	1
	106

The Medical Officer to the Port Sanitary Authority desires to express his appreciation of the valuable assistance received from H.M. Collector of Customs and Staff, the Mersey Docks and Habour Board and their Officers, and the various Shipping Companies who have co-operated with the Port Sanitary Authority in preventing disease, and have worked harmoniously together in every particular. The Consular Body have at all times given courteous assistance.

E. W. HOPE, M.D.

MUNICIPAL OFFICES,
LIVERPOOL, 1*st July*, 1923.